

JPRS-TEP-92-008

5 MAY 1992



FOREIGN  
BROADCAST  
INFORMATION  
SERVICE

# ***JPRS Report***

## **Epidemiology**

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# Epidemiology

JPRS-TEP-92-008

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5 May 1992

[Recent materials on AIDS is being published separately in a later issue.]

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## ANGOLA

### Epidemiological Report for Namibe Province

MB1904184992X Luanda Radio Nacional Network  
in Portuguese 1900 GMT 13 Apr 92

[Excerpt] In Namibe Province a total of 339 cases of measles were reported between December 1991 and March 1992, resulting in the deaths of 68 children. The latter were also affected by malaria. The provincial health directorate recorded 20 cholera cases, including four deaths during the same period. [Passage omitted]

## BURUNDI

### Cholera Outbreak in Bujumbura

EA0604210092 Bujumbura Radio-Television Nationale  
du Burundi Radio in French 1100 GMT 6 Apr 92

[Excerpt] Attention, cholera is hitting hard in Bujumbura: More than 222 persons have been affected [words indistinct]. Statistics are unbelievable. More than 6,000 persons have already been infected. They may not necessarily develop the disease but can infect [others]. This is to say that the Burundi capital has been besieged by cholera vibrios. Gerard Nkuranzima reports:

[Begin recording] Plague concerns all of us, Albert Camus once said. Cholera is among us, it has already had 16 victims, seven in Bujumbura and nine in Citeko [northern Burundi]. The public health services are categorical: At least 10 cases are being registered in Bujumbura hospital everyday and there are always around 20 people to be hospitalized daily [as heard]. The alarm is really sounding from the public health services, especially around the areas of Bwiza, Cibitoke, Kamenge, Buyenzi and Kinama. [end recording] [passage omitted]

## CENTRAL AFRICAN REPUBLIC

### Ministry Takes Stock of Meningitis Outbreak

AB1503141492 Bangui Radiodiffusion-Television  
Centrafricaine Radio in French 1800 GMT  
13 March 92

[Excerpt] A meningitis epidemic broke out at Kisende [as heard] in Boundou [as heard]. An emergency meeting was held on the issue this afternoon at the conference hall at the health department building. It was the third preparatory meeting, and it was chaired by Dr. Francois Suvey, head officer at the Ministry of Health, representing the health minister. He took stock of the situation brought about by the meningitis epidemic in Boundou as of 12 March, and about 183 cases had been registered from 5 January to 12 March.

In order to fight this epidemic, the Ministry of Health and Social Affairs decided to launch a campaign called Stop Meningitis in Boundou, and the operation will have technical support and a team of biologists based in

France. Their mission will be to bring the epidemic under control. The team will arrive tomorrow evening in Bangui aboard an Air Afrique flight and will go to Boundou on Sunday morning.

Meanwhile, Central African Republic [CAR] Government currently receives drugs and personnel from the CAR branch of WHO, the U.S. Agency for International Development, UNICEF, and the Bangui Pasteur Institute. [passage omitted]

### BBC Reports Meningitis 'Claiming Many Lives'

AB2803145092 London BBC World Service in English  
1830 GMT 25 Mar 92

[From the "Focus on Africa" program]

[Text] The medical authorities in the Central African Republic [CAR] are wrestling with an outbreak of meningitis in the north of the country. It has been going on for a while and is claiming many lives, as Joseph Ponamze reports in this telex from Bangui:

[Begin studio announcer recording] The epidemics which broke out in the north of the country, especially in cities like Bozoum and Paoua two weeks ago have, according to unofficial estimates, claimed more than 100 lives. The rapidly spreading disease has also affected people in Bouar where the French Army is based.

The WHO as well as some friendly countries like France and the United States of America have responded with cash to the government's appeal for help. Last week, French military relief workers were sent into the affected areas. The prime minister who today toured the areas declared himself satisfied with the relief operations, saying that some 160,000 vaccines have already been administered to the victims of the meningitis epidemic.

Meanwhile, people in the capital, Bangui, have since Monday [23 March] been lining up at the Pasteur Institute to get themselves vaccinated against meningitis at the cost of 2,500 CFA francs each. [end recording]

## GHANA

### Meningitis Outbreak in Brong Ahafo

92WE0357C Accra PEOPLE'S DAILY GRAPHIC  
in English 8 Feb 92 pp 1, 8-9

[Article by Joe Bradford Nvinah]

[Text] The deadly Cerebro-Spinal Meningitis (CSM) epidemic has broken out in the Brong Ahafo Region with 52 percent fatality of cases reported.

Since January when the first case was reported, 46 cases have been recorded with 24 deaths.

A message from the Brong Ahafo Regional Administration to the PNDC Secretariat in Accra this week noted that 20 cases have so far been reported in the Tano District with 11 deaths.

In the Jaman District, one person has died out of six reported cases whilst in the Asutifi District seven people out of the 10 who had the disease died.

In the Atebubu District, all five reported cases were fatal but in Sunyani and Techiman Districts none of the two and three people who caught the disease respectively died.

To arrest the situation, the regional administration has set up a monitoring team to trace any outbreak of cases.

All district medical officers of health have also been notified to organise public education on the causes of the disease and the need to report symptoms to medical authorities.

District health nurses have also been informed to step up house-to-house education on the disease.

Immunisation has also been commenced in affected communities and immunisation expansion programme have been planned depending on confirmation of organism causing the epidemic.

#### **Burkina Cooperating on Livestock Diseases**

**92WE0320A Accra PEOPLE'S DAILY GRAPHIC**  
*in English 1 Feb 92 p 16*

[Text] The Animal Health and Production Department (AHPD) of Ghana and Animal Health Services of Burkina Faso have resolved to exchange information and improve communication on their activities as part of efforts to improve animal health service along their common border.

This was contained in a communique issued at the end of a Pan-African Rinderpest Campaign (PARC) border harmonisation meeting at Bolgatanga to exchange ideas, experiences and strategies for PARC.

The two countries also resolved to exchange information and identification marks used on vaccinated animals and to report the outbreak of diseases to the other side within two weeks of detection as well as inform each other about animal rushing across their common border.

The head of the Ghana delegation, Dr. A.G. Kankoh, said Ghana will start the PARC programme by the end of the year, adding that material for improving the programme is expected in the country by June, this year.

Dr. Kankoh thanked the Burkina Faso delegation for sharing their experiences with their Ghanaian counterparts and expressed the hope that such level of cooperation will continue to grow.

Dr. Mare Guiadoma, head of the Burkina Faso delegation assured the Ghana side of their preparedness to share knowledge and experience.

He added that 1,691,490 cattle have been vaccinated against rinderpest in the southern provinces of Burkina Faso under the PARC programme.

Meanwhile, there was no major outbreak of livestock diseases in the two upper regions last year as a result of effective surveillance and control by the Animal Health and Production Department (AHPD) of the Ministry of Agriculture.

This was announced by Dr. F.K. Adu and Dr. F.C. Fenteng Regional Officers of AHPD in the Upper East and Upper West Region respectively when they briefed Pan African Rinderpest Campaign (PARC) border harmonisation meeting with their counterparts from the southern provinces of Burkina Faso at Bolgatanga.

#### **MOZAMBIQUE**

##### **More Than 57 Cholera Cases, Two Deaths in Gaza**

**MB0703133792 Maputo Radio Mozambique Network**  
*in Portuguese 1030 GMT 7 Mar 92*

[Text] Health authorities in Chokwe District, Gaza Province, have banned the sale of fish caught at Bambeni in Chibuto District. A health source in Gaza said it is believed the outbreak of cholera in Chokwe was caused by the fish. More than 57 cholera cases have been recorded in Chokwe, while two people have died of the disease at Chilembene and Machavasse.

##### **Beira Health Sources Report 200 Cholera Cases in Feb**

**MB0903090592 Maputo Radio Mozambique Network**  
*in Portuguese 0800 GMT 9 Mar 92*

[Text] Some 200 cholera cases were reported in Beira, the capital of Sofala Province, during February. AIM learned this from health sources in that city.

Those sources also said that 67 people have been admitted to the Beira Central Hospital, where a special cholera treatment ward has been created.

Beira City Health Director Soraya Namid has disclosed that no deaths have occurred since the cholera epidemic broke out in early February.

##### **Seventeen Deaths of Cholera From 26 Jan to 26 Feb**

**MB1603202592 Maputo Radio Mozambique Network**  
*in Portuguese 1730 GMT 16 Mar 92*

[Text] At least 17 people died of cholera in Mozambique between 26 January and 23 February this year. According to a WHO epidemiology bulletin issued in

Geneva, 2,450 cases of cholera were also reported during the same period. The areas most affected by cholera were the districts of Chiure in Cabo Delgado Province; Chokwe and Xai-Xai in Gaza Province; Boane, Manica, Moamba, and Namaacha in Maputo Province; and Namacurra and Nicuadala in Zambezia Province.

#### **Sofala Province Records 19 Cholera Cases By 16 Mar**

*MB1703110092 Maputo Radio Mozambique Network in Portuguese 0800 GMT 17 Mar 92*

[Text] The NOTICIAS newspaper reports that Sofala Province had recorded 19 cholera cases up to yesterday. Beira city and Buzi district are the worst hit areas.

NOTICIAS also reports that the tendency is for the epidemic to spread to other parts of the province.

#### **Four Die of Cholera in Sofala Province**

*MB2003202692 Maputo Radio Mozambique Network in Portuguese 1730 GMT 20 Mar 92*

[Excerpt] Two people have died of cholera in Buzi District, thus making a total of four people who have died of the disease in Sofala Province recently. The Buzi Rural Hospital has already registered 165 cases of diarrhea affecting mainly children and adolescents. [passage omitted]

#### **Cholera Situation in Chokwe Worrying Health Officials**

*MB2103115392 Maputo Radio Mozambique Network in Portuguese 0800 GMT 21 Mar 92*

[Text] Five people have died of cholera in Gaza Province's Chokwe District since January. Some 200 cholera cases have been reported in that area, and the situation is worrying the health authorities.

### **NIGERIA**

#### **High Incidence of Infection**

*92WE0321A Lagos THE GUARDIAN in English 12 Feb 92 p 3*

[Article by Ben Ukwuoma: "Minister Urges Councils To Fight Guinea Worm"]

[Excerpts] Health and Human Service Minister Professor Olikoye Ransome-Kuti yesterday distributed the 22 4WD Toyota Landcruisers donated by the Japanese Government to selected council areas, charging them to join the campaign to eradicate scourge of guinea worm by 1995. [Passage omitted]

According to him, about 394,732 cases of guinea worm infection have been reported in the latest case search, with Anambra, Ondo, Sokoto and Benue being highly endemic states.

Nine other states with between 5,000 and 20,000 cases are classified as moderately endemic while eight states are considered low endemic with fewer than 5,000 cases each.

No case has been reported in Akwa Ibom State.

Mr. Yasushi Kurokodu, Japan's Ambassador to Nigeria said his country is at present funding water projects in three council areas of Niger State.

#### **Team To Study Cholera, Meningitis Outbreak**

*92WE0359A Lagos THE GUARDIAN in English 20 Feb 92 p 2*

[Article by Onajomo Orere]

[Text] Health and Human Services Minister Professor Olikoye Ransome-Kuti has approved despatching epidemiologists and other health workers to Cross River, Enugu and Benue states to study the outbreak of cholera and cerebro-spinal meningitis (CSM) about a fortnight ago there.

They will leave Lagos today.

In Cross River State, about 100 people reportedly died of cholera as at the week-end, while the situation in Benue and Enugu is still unclear.

No fewer than 7,000 people died in last year's cholera epidemic in Nigeria, the highest casualty figure worldwide.

CSM has a vaccine for prevention; while cholera has none but the World Health Organisation (WHO) has recommended general cleanliness and the use of salt and sugar solution (SSS) in the event of a cholera attack.

#### **Radio Reports Meningitis, Measles Outbreak in Kano**

*AB2503113592 Lagos Radio Nigeria Network in English 0600 GMT 24 Mar 92*

[Text] An outbreak of cerebrospinal meningitis and measles has been reported in Kano Metropolis. Over 150 cases have so far been reported in the hospitals. The medical officer in charge of the State Infectious Diseases Hospital, Dr. Chukwu Okafor, stated this when the state deputy governor, Alhaji Ahmed Usman, visited the hospital. Tony Oladikpor has the report:

[Begin recording] Alhaji Ahmed Usman, who was on an inspection of the hospital promised to act promptly to rescue the situation. He disclosed that about 4 million naira was used to purchase drugs for infectious diseases in the state last month. Earlier, the director general, Ministry of Health, Dr. Suleiman Kulala, told the governor that drugs purchased in the state were distributed to hospitals as immunizations are being carried out at the hospitals to prevent further spread. [end recording]

## SOUTH AFRICA

### Group Claims Cholera Traces Found Near Zevenfontein Camp

*MB1303102092 Johannesburg SABC TV 1 Network in English 0500 GMT 13 Mar 92*

[Text] The (Chartwell) North Action Group says traces of cholera have been found in two samples of water taken from the Jukskei River bordering the Zevenfontein squatter camp.

They said the samples had tested positive for cholera by the Pretoria University's Institute of Pathology. This followed an earlier statement by the Transvaal Provincial Administration [TPA] claiming there was no cholera in water at the squatter camp.

The action group said the presence of cholera at the camp had two implications: that the TPA had covered up the presence of cholera at the camp, and that a serious health hazard existed.

## SWAZILAND

### Brucellosis Outbreak in Shiselweni Region, Nhlangano

*MB0204180792 Mbabane Radio Swaziland Network in English 1600 GMT 2 Apr 92*

[Text] The Ministry of Agriculture and Cooperatives reports that cattle in the Shiselweni region continue being attacked by a contagious cattle disease called brucellosis. The director of Veterinary Services, Dr. Robert Thwala, said a new outbreak has been confirmed in the Nhlangano area.

Brucellosis causes abortion in cattle between the sixth and ninth month of pregnancy. It can also be transmitted to human beings, causing fever, headaches, muscular pain, and weakness. It can be spread to human beings in the milk of affected cows, but is more typically spread through discharges and fetuses resulting from an abortion.

Dr. Thwala said his department is to conduct a vaccination campaign on cattle in Swazi national land. Female cows between three and nine months of age will be vaccinated at no cost to the Swazi nation land farmer to protect them from this disease. The last time cows were vaccinated was in 1990, and all of them went through without any side effects.

## UGANDA

### Cholera Breaks Out in Moarara District

*92WE03224 Kampala THE NEW VISION in English 1 Feb 92 p 10*

[Article by Justus Muhangizi: "Cholera Hits Ibanda"]

[Text] There has been an outbreak of cholera in Ibanda sub-district, Mbarara, leaving two people dead.

A team from the Ministry of Health has already visited the district and confirmed the outbreak of the epidemic. And, medical officers in Mbarara have said the most affected areas include Kabagole, Kitagwenda, Ishongolero and Kanywambogo.

The District Health Inspector, Mbarara, Mr. Charles Tumwebaze, said the first suspected cholera case was reported in Nyabuhikye camp near Ibanda on January 8 this year.

Tumwebaze said the first victim was identified as Isingahi, a tractor driver and resident of Nyabuhikye camp. He said Isingahi died immediately after being admitted to Ibanda Hospital on January 9, 1992, while another camp-mate developed the same cholera symptoms two days after.

Another case, which was also confirmed was in Busheshe sub-county also in Ibanda from where Elias Mugume was admitted at Ibanda Hospital on January 13, with acute gastro enteritis, watery stool and severe dehydration. He died on January 20.

Mugume's brother, with whom he had stayed for two days, later developed diarrhoea and died instantly.

According to a report by the District Health Inspector, "the epidemic may have spread from Kasese where there was an outbreak in November, last year."

Tumwebaze observed that the first victim, Isingahi, had returned from Kabarole, while Mugume had just come from Kasese before he died.

Meanwhile, measures have been taken to control the spread of the disease.

Last year, when there was an outbreak in Kasere, the medical authorities banned the sale of footstuffs [as printed] in open places in Mbarara town.

### Quarantine on Livestock Movement Lifted

*92WE0322B Kampala THE NEW VISION in English 1 Feb 92 p 16*

[Article by Sam Mukalazi: "Countrywide Livestock Quarantine Lifted"]

[Text] The Commissioner of Veterinary Services, Dr. S.E. Onyait, has instructed all District Veterinary Officers (DVOs) to temporarily open up strategic livestock markets in their areas to promote free trade in livestock.

This follows a one-year quarantine on free movement of livestock in districts affected by cattle lung disease, Contagious Bovine Pleuro Pneumonia (CBPP). The disease does not affect human beings who consume the meat of infected animals.

In a letter dated, January 21, 1992 and addressed to all DVOs, Dr. Onyait said the move was taken after achieving high vaccination coverage against CBPP.

He, however, cautioned that only slaughter cattle should be brought to markets and that all animals destined to slaughter houses must be moved in vehicles to minimize spread of the disease.

Among other measures instituted by the officer is the requirement for a letter from the local RCs and endorsed by veterinary staff of the area, to accompany all animals going to the markets. The letter states that to stop illegal stock movements check points have been established at Lyantonde, Lukaya, Mpigi, Wobulenzi and Mityana.

When THE NEW VISION called on DVO, Mbarara, Dr. J.L. Barigye for comment on the measures, he said 930,000 heads of cattle of about 1m heads in the district had been vaccinated since December 1990.

He said most affected areas were Nyakashashara and Sanga sub-counties where most ranches are located. Barigye said methods of control include vaccination against both CBPP and rinderpest, control of livestock movement, removal of infected animals and education of staff and farmers about CBPP.

He said that the second phase with a "boost dose" of vaccination had to stop in November last year due to lack of vaccines, but 110,000 heads of cattle had been vaccinated already.

Districts under quarantine are Mbarara, Bushenyi, Rakai, Kabarole and Masaka.

## ZAMBIA

### Cholera Toll 20 Deaths in One Week

92WE0323A Lusaka TIMES OF ZAMBIA in English  
8 Feb 92 p 3

[Text] Twenty people have died in the continuing cholera outbreak in 254 cases reported throughout Zambia last week.

Director of medical services, Dr. Sam Nyaywa said in Lusaka yesterday he was concerned about the high incidence rate in Ndola and Lusaka and that a group of experts from UNICEF were in Zambia to find ways to improve water sanitation in the hard hit areas.

The number of deaths has reached more than 400. "Unless something is done cholera will continue to rise in these areas," he said.

Ndola recorded seven deaths and 110 cases out of 145 reported on the Copperbelt followed by 27 in Kitwe, seven in Chingola, and one in Mufulira.

Dr. Nyaywa said the incidence in Ndola was aggravated by the theft of the new van recently in which the driver was shot dead by armed men.

Central and Lusaka provinces recorded five deaths each. Central had 28 cases while 67 cases were reported in Lusaka of which 80 percent belonged to people under 35 years of age.

Dr. Nyaywa said the majority of the victims were from Kanyama, George, Chunga and Lilanda townships.

Two deaths were reported and five cases in Luapula, one death and one case in Northern and no deaths and eight cases in Southern Province.

He said Mbala which had been a problem area had been quiet in the last week.

Dysentery cases had been reduced drastically because a correction had been made on the drug administered.

He said dysentery patients were in the past resistant to the drug.

### Cholera Resurfaces in Petauke

92WE0355A Lusaka TIMES OF ZAMBIA in English  
28 Feb 92 p 2

[Text] Cholera has resurfaced in Petauke where one person has died and 10 others admitted to Minga and Munbi health institutions.

Petauke district officer-in-charge Dr. Chad Simusa confirmed yesterday seven cholera patients were admitted at Minga mission hospital and three others from one family at Munbi rural health centre.

Dr. Simusa urged residents to observe a high standard of hygiene even though the situation was under control and the hospital had enough cholera drugs.

Several patients were being admitted to Petauke hospital daily with dysentery but no one had so far died.

Public health authorities have since banned street vending of foodstuffs.

In Kitwe cholera epidemic has considerably ebbed although the disease is far from being completely eradicated, Kitwe city council medical officer for health Dr. Manuel Mfune, said yesterday.

Dr. Mfune who is chairman for the district cholera surveillance committee said "very few patients" were being treated at Chimwemwe and Mindolo Centres as were diarrhoea cases.

"It appears the dry spell has been a blessing in disguise but the disease is far from being completely eradicated because nothing has been done to improve our environment," he said.

There was still much to be done nationwide to improve sanitary conditions.

Dr. Mfune confirmed the closure of Ndeke centre but said the other two would remain open.

But he said the position of cholera in the district was generally improving and said the dry spell had put the cholera germs "out of action" for the time being.

And the United States has given the Lusaka Water Sewerage Company (LWSC) \$675,000 to finance a feasibility study on expansion of the water system in the capital.

The rehabilitation of the system is expected to reduce incidences of cholera in Lusaka which had now become an endemic killing hundreds of lives every year.

According to a Press statement from the American embassy, US ambassador Mr. Gordon Streeb and LWSC chairman Mr. Abel Mkandawire yesterday signed an agreement for the provision of funds by the US trade development programme.

#### **Seventeen Kitwe Prison Inmates Die of Cholera, Dysentery**

*MB2703133492 Johannesburg SAPA in English  
1047 GMT 27 Mar 92*

[Text] Lusaka Mar 27 SAPA—Seventeen prisoners have died at Kamfinsa prison near the Copperbelt mining city of Kitwe in two months, nine of them from cholera and dysentery.

The Zambian Government had insisted the institution will not be closed despite the outbreak of the killer diseases, the government-owned newspaper THE TIMES OF ZAMBIA quoted the prison authorities as saying in Friday's edition.

The newspaper quoted Assistant Commissioner of Prisons Charles Njunga in Kitwe as saying the prison had also been hit by a shortage of transport.

Member of parliament for Kamfinsa Lemmy Chipili has since been briefed about the situation which he described as appallingly desperate and needing immediate attention.

Home Affairs Minister Newstead Zimba maintained in Lusaka when contacted for comment that there was no justification in shutting the prison as measures were being taken to contain the situation.

Two other prisoners died in prison, one from diarrhoea and another from abdominal pains. The rest died of TB, pneumonia and malaria.

#### **Ten Dysentery Deaths in 2 Districts**

*92WE0358A Lusaka TIMES OF ZAMBIA in English  
18 Feb 92 p 3*

[Text] Ten people have died in one week—five each in Serenje and Isoka—in separate outbreaks of dysentery, it was learnt in Ndola yesterday.

In Isoka, district executive secretary Mr. Peter Nkowani said in a telephone interview yesterday the five were two children and three adults and medical workers had been dispatched to the area for an on the spot investigation.

He said the five deaths were recorded last week in two rural areas including Kampumbu.

And five more people have died from dysentery in Chief Chisomo's area in Serenje bringing the death toll to nine since the epidemic broke out a week ago.

Meanwhile, MMD officials in conjunction with health workers in Monze, have launched a vigorous cholera awareness campaign programme following the outbreak of the killer disease in the district, reports Zana.

So far 82 cholera patients have been admitted to the newly created isolation ward at Lusumpuko community hall.

The campaign team is led by MMD district chairman for Monze Mr. Grave Muleva.

#### **Health Minister Says Malaria Claimed 10,000 Lives Last Year**

*MB0503153792 Johannesburg Radio RSA in English  
1100 GMT 5 Mar 92*

[Text] More than 10,000 people died of malaria in Zambia last year. The Zambian minister of health, Dr. Boniface Kawimbe, said in Lusaka that 2 million people had contracted malaria in the same period. Dr. Kawimbe told a health seminar that malaria was the most deadly disease in Zambia.

He said assistance that had been received from the Iranian Government to help combat malaria would go a long way in reducing the incidence of the disease in Zambia. Zambia is one of seven African countries designated by the World Health Organization for increasing assistance during the next five years.

**Epidemic Deaths Down for 1991**

*HK1603012092A Beijing CHINA DAILY in English*  
*16 Mar 92 p 3*

[Article by staff reporter Zhu Baoxia: "Epidemic Death Down Despite the Flood in '91"]

[Excerpts] The number of people dying of epidemics in the country had a remarkable decrease despite the serious floods last summer, the Ministry of Public Health reported.

Epidemics killed 9,583 people in China last year, some 27.83 percent lower than in the previous year, according to the figures from the Ministry.

The incidence of the epidemic illnesses like hepatitis, cholera, whooping cough and measles last year was 287 per 100,000 people, a 3.3 percent decline from the 1990 figure.

The eight provinces which were attacked by severe floods last summer reported about 1.8 million epidemic cases, among them only 5,307 died. A drop of 5.09 and 29.6 percent respectively comparing [as published] with that of the previous year.

The ministry owed the victory to strengthened epidemic inspections after disasters as well as great endeavors of the medical staffs and the public.

Last year, 33 people from across the country were reported to have contracted plague, and 11 died.

A total of 211 cholera cases were reported, but no people died from it.

As a result of the expanded immunization programme, incidence rates of polio, whooping cough and diphtheria declined by 62.67, 47.62 and 46.17 percent each. And that of whooping cough and diphtheria were the lowest figures since the founding of the People's Republic of China.

Currently above 85 percent of the urban children can receive timely inoculations.

Figures also showed that patients with measles increased by 41.38 percent last year, most concentrated in some rural and mountainous areas.

Cases of intestinal diseases have declined, comparing last year with the year before, among which 40.58 percent were dysentery, and viral hepatitis accounted for 32.25 percent.

The country saw a 7.03 percent increase of hepatitis A last year, mainly in provinces of Gansu, Yunnan, Shanxi, Henan and Anhui.

Patients with typhoid went up by 2.46 percent, most reported from provinces and autonomous regions including Guizhou, Shanxi, Inner Mongolia, Jiangxi, Anhui and Xinjiang.

Though the number of gonorrhea patients increased by 5.81 percent, syphilis cases dropped by 23.48 percent. [Passage omitted]

Although the death rate from rabies also decreased by 41.34 percent last year, it remained the No 1 epidemic killer of Chinese, making up 21.93 percent of the total epidemic deaths reported.

**Ministry Statistics Show Decline in Infectious Diseases**

*OW1703092792 Beijing XINHUA in English*  
*0747 GMT 17 Mar 92*

[Excerpt] Beijing, March 17 (XINHUA)—New statistics from the Ministry of Public Health show that the incidence of infectious disease dropped in China in 1991.

The total incidence of disease was 287 per 100,000, the mortality rate 0.85 per 100,000 and the illness death rate 0.03 percent, respectively dropping by 3.3 percent, 27.83 percent, 25.36 percent as compared with figures of the previous year.

Of the category under the planned immunity, the incidence of whooping cough, diphtheria and infantile paralysis fell by the largest margin, respectively by 47.62 percent, 46.17 percent, and 62.67 percent; that of the epidemic cerebrospinal meningitis continued to fall after a big drop in 1991; but that of measles rose.

The incidence of enteric disease, the leading disease accounting for 40.85 percent of the total, also dropped.

The incidence of hepatitis increased by 16.02 percent, that of gonorrhea rose by 5.81 percent, and that of syphilis dropped by 23.48 percent. [Passage omitted]

**Disease Prevention Effort Expanded**

*OW2903140992 Beijing XINHUA in English*  
*1332 GMT 29 Mar 92*

[Text] Beijing, March 29 (XINHUA)—The Chinese government has drafted measures to eradicate disease in 70 percent of the country's disease prevalent areas during the Eighth Five-Year Plan period (1991-1995).

The plan, drafted by the Ministry of Public Health, includes reducing the occurrence of snail fever by 40 percent and acute colds by 30 percent. The plans also includes ensuring the availability of pure drinking water in areas with a high incidence of disease.

In addition, a campaign to disseminate information related to the prevention of disease will be carried out in the areas.

**CAMBODIA****UNTAC, Refugees Vulnerable to Drug-Resistant Malaria**

*BK1903032992 Bangkok BANGKOK POST in English 19 Mar 92 p 6*

[Text] More than 16,000 United Nations peace-keeping soldiers entering Cambodia risk catching a severe form of malaria that is resistant to drugs usually used against the disease.

Some 360,000 Cambodian refugees are also at risk when they return home from Thailand in the next few weeks.

According to world Health Organisation experts, drug supplies in Cambodia are low, perhaps a quarter of what is needed. Quinine plus tetracycline (the main emergency treatment), intravenous quinine dihydrochloride and quinine sulphate tablets, and mefloquine are all in short supply.

"If Cambodia cannot get enough drugs and support for the improvement of health care and training, there may be a tragedy," warned Dr. Hiroshi Nakajima, director-general of WHO.

Resistance appears to be developing to most treatments—even to mefloquine. In a typical clinic, a month's supply of drugs runs out in a week. Private traders—not physicians—are selling what supplies they can obtain.

The peace-keeping force has been advised that, when in malarial areas for prolonged periods, soldiers should regularly take doxycycline, an antibiotic, which has so far not been used or abused in the area, according to WHO experts.

Doxycycline offers protection against initial malaria infection, and there is so far no hard evidence of resistance to the drug. There has been little experience with prolonged use of doxycycline, except in some cases where it has been prescribed for severe acne.

Soldiers of the force will also be instructed to use insect repellent, wear long-sleeved clothes, and sleep under bed nets impregnated with insecticide.

The shortage of drugs and the difficulty of establishing health care in the main malaria areas—because they have suffered much military action—have favoured the development of the resistant malaria parasite, according to the experts.

Many people received partial treatment, which allows malaria parasites with some degree of resistance to the treatment to grow, making the person sick again. Then these resistant parasites are picked up by other mosquitoes and transmitted when the mosquitoes bite other people, who get resistant malaria.

The Thai-Cambodian border area, which has the worst malaria, is rich in gems, timber and migrants trying to

make a living. It is also laced with landmines and controlled by several factions. The dying are mostly young men who are desperate enough to try to work in the area.

Some drugs still work, and "we are continually looking for ways to get enough drugs," said Dr. Jean-Paul Menu, a special health envoy for WHO in Cambodia.

**SOUTH KOREA****Cholera Victim Recently Returned From Southeast Asian Tour**

*SK2204061192 Seoul THE KOREA TIMES in English 22 Apr 92 p 3*

[Text] A 74-year-old man who has been to Southeast Asia was found to have been infected with cholera, the Health Social Affairs Ministry reported Monday.

The man, identified only as a Yi of Puchon, Kyonggi-to, was under treatment in isolation after a test showed signs of cholera.

Yi was among the 201 passengers who arrived at Kimpo International Airport aboard KAL flight 606 after leaving Bangkok on April 15. They made a stopover in Taipei.

Along with 30 other members of a tour group organized by a Seoul Tour Agency, Yi visited Singapore, Indonesia and Thailand for a week beginning April 9.

**LAOS****Epidemic Cases in Champassak Province**

*BK1203103092 Vientiane KPL in English 0905 GMT 12 Mar 92*

[Excerpt] Vientiane, 12 March (KPL)—Diarrhea epidemic, mid last month erupted in Kadan village, Khong District, southern Champassak Province.

Despite the effort of the district medical personnel, the disease claimed two lives.

During the same month, malaria struck Don Det village, district of the same name, killing four persons. [passage omitted]

**Animal Disease Outbreaks in Bokeo Detailed**

*92WE0254A Vientiane PASASON in Lao 6 Jan 92 p 1*

[Unattributed report: "Animal Disease Spreads in Meung District"]

[Text] In the last three months of 1991 pasteurellosis and hoof and mouth disease spread in Meung District of Bokeo Province.

This epidemic has affected the animal husbandry of the people: 20 cattle, 50 pigs and 300 poultry have died.

Now this epidemic has spread to many locations, and the agriculture service, in particular the veterinary branch, has been doing research to prevent and stop the spread of these diseases.

It was also reported that in 1991 the district veterinary unit of Vapi District in Saravane Province took care to vaccinate 92,241 livestock of the people throughout the district. They vaccinated 4,892 buffalo, 4,000 cattle, 82,300 poultry and others.

These vaccinations were aimed at preventing pasteurellosis, hoof and mouth disease, pneumonia, cholera and others. In the past year they have been able to limit livestock deaths to 24.

#### Animal Epidemic in Champassak

BK1903113692 Vientiane KPL in English 0917 GMT  
19 Mar 92

[Text] Vientiane, March 19 (KPL)—Last year, Champassak Province lost a number of animals from epidemics such as haemorrhagic septicemia, cholera and others. In particular, 893 water buffaloes, 254 head of cattle, 209 pigs at Veun Village, Mounlapamok District, where the epidemic spread was very serious, died.

The loss was attributed to the lack of vaccines, veterinary care and equipment and the indifference of farmers to vaccinate their animals.

However, this southern province also registered 125,709 water buffaloes, 118,622 head of cattle, 115,978 pigs, and others.

The parties concerned, this year, plan to acquire veterinary equipment and vaccines necessary for the vaccination campaign which is planned to give shots to 40 to 50 percent of the entire animal population in the province.

#### PAPUA NEW GUINEA

##### Typhoid Ails One-Third of Western Highlands People

BK2503113392 Melbourne Radio Australia in English  
0803 GMT 25 Mar 92

[From the program "International Report"]

[Text] Two patients in almost every bed and other patients being treated on the floor, it would be a crisis situation in any hospital in Australia, but it is just the way things are at the typhoid Isolation Ward at Mt. Hagen hospital in the Western Highlands of Papua New Guinea [PNG]. Virtually unknown before 1986, typhoid has become a major health problem and almost a third of the population affected in the Western Highlands Province centered on Mt. Hagen. Port Moresby correspondent Brian Abbott reports there is very little health authorities can do to control typhoid because the every day living conditions of the people encourage the spread of the disease. [Begin recording]

**Abbott:** The Western Highlands health minister, (Karl Cu), says they may have to put up tents in the grounds of the Mt. Hagen hospital to cope with the overflow of typhoid patients. The 30-bed isolation ward recently renovated and improved with Japanese aid funds cannot cope with the number of people needing treatment. There are two patients on every bed sweating with the fever, the stomach upsets and body sores typical of typhoid and more patients are being treated on the floor. But they are the lucky ones. In rural health centers outside Mt. Hagen, conditions are even more primitive, and many lack sufficient supply of drugs to control the symptoms of typhoid. Western Highlands Provisional Disease Controller Bernard Brao says authorities are doing what they can to control the typhoid outbreak but that is not much at all.

**Brao:** There is very, very little that we can do in the villages so the villagers are coming from almost every village and it is very difficult now. But that does not mean that we are not doing enough [words indistinct] but looks like the situation is not truly improving.

**Abbott:** Do you know how many people in the Western Highlands area would be affected by typhoid?

**Brao:** About a third of the total population.

**Abbott:** Mt. Hagen hospital is similar to all major hospitals in PNG, barely adequate and lacking sufficient trained staff, facilities, and funding. Mr. Brao says dedicated overworked doctors are not even sure of their diagnosis that the disease is typhoid.

**Brao:** It is not really confirmed. The problem that we have in our hospital is that we have got our laboratory here but the laboratory system is not really functioning. That is why we cannot really confirm whether it is typhoid or malaria or some disease.

**Abbott:** Western Highlands is the most densely populated region of PNG outside Port Moresby with people living in small villages many without proper water supply and sanitation. Ideal breeding grounds for the typhoid bacteria according to Health Minister (Karl Cu). Disease Controller (Bernard Brao) said it is a vicious cycle for the people with the national government not being prepared to spend money on a vaccination campaign until conditions in the villages are improved.

**Brao:** The government would like to pour resources into this kind of remote place and the situation of [words indistinct] unless we improve the sanitation and [word indistinct] of the villages that will improve their situation.

**Abbott:** The program has an extensive education campaign to teach people the need to improve personal hygiene and improve hygiene in food preparation. They cannot provide the necessary funding to ensure there was a safe water supply in every village—a necessary first step in the eradication of typhoid. At least 120 people have died of typhoid around Mt. Hagen since 1986.

Health authorities say the death toll will continue rising for many more years because of the lack of facilities and funding to wipe out what is a preventable disease. [end recording]

## THAILAND

### Anthrax Outbreak in Udon

*92WE0246B Bangkok NAEON in Thai 21 Dec 91 p 3*

[Excerpts] A reporter in Udon Thani Province reported that Ministry of Public Health officials in Udon Thani Province issued a warning about the spread of anthrax. [passage omitted]

Following that, a report was received from Dr. Nithat Raiyawa, the Udon Thani provincial public officer, stating that since 11 December, several people had been treated at the provincial hospital for anthrax. The Public Health Office sent officials to conduct surveys in four subdistricts in Muang District, Udon Thani Province, that is, Nadi, Ban Luam, Sam Phrao, and Nong Bua Subdistricts. They also conducted surveys in parts of the city. To date, they have found 19 cases of anthrax, two of whom have died. Besides this, another 945 people have come in contact with the disease. Thus, the Udon Thani provincial public health official has ordered that medicines be rushed there to treat these people.

Dr. Nithat said that anthrax is a bacterial disease caused by *Bacillus anthracis*. This bacteria is prevalent in cattle and water buffaloes. If people come in contact with or eat the meat of infected animals or even inhale this bacteria, they can become infected. The report stated that the two people who had died from anthrax had eaten raw beef.

Mr. Soemsak Baolophet, the Udon Thani provincial livestock officer, said that the Udon Thani Livestock Office has conducted surveys and found eight head of cattle and buffaloes with this disease. There has never before been an outbreak of anthrax in Udon Thani Province. Because of this, the Livestock Department has not inoculated animals. Now that there has been an outbreak of anthrax, the Livestock Office is taking quick action to vaccinate every animal in the areas where there have been outbreaks. Normally, the causative organism of this disease can live for up to 10 years in all kinds of environments.

Dr. Nithat expressed alarm over the fact that several villagers have used the meat of infected animals to make jerky and sell it. Officials can't control this. Thus, it is feared that this will pose a great danger to those who buy this jerky, particularly people from other localities. The provincial public health officer said that it would be best to avoid eating beef for the time being.

Mr. Thawat Phothisunthon, the provincial governor, who has been informed about this, expressed great concern and has ordered provincial public health officials to find a way to prevent this disease.

### Cooperation With Burma on Malaria Eradication

*92WE0277B Bangkok DAO SIAM in Thai 11 Jan 92 pp 11, 15*

[Excerpt] Thailand and Burma are cooperating in preventing and controlling the spread of malaria along the border. Because in 1991, there were 7,053 cases of malaria in Mae Ramat District, Tak Province. Half of these people were foreigners who moved across the border into Thailand.

On 6 January, following a visit to the Mae Ramat Hospital in Mae Ramat District, which is a 30-bed community hospital, Dr. Phairot Ningsanon, the minister of public health, said that malaria is still an important public health problem in Mae Ramat District. Statistics kept by this hospital show that in 1991, there were 7,053 cases of malaria in this district, which has a population of 34,908 people. That is a rate of 202 malaria patients for every 1,000 people. Of these, about half were foreigners.

The minister of public health said that because Mae Ramat shares a border with Burma, there are problems with people crossing the border into Thailand. In particular, during the rainy season each year, a large number of people come here to work as hired laborers and traders. This is also the time of the year when there are outbreaks of malaria, which is transmitted by the anopheles mosquito. Because of this, large numbers of these migrants contract malaria. [passage omitted]

### New Hog Disease Outbreak Feared

*92WE0246E Bangkok MATICHON in Thai 3 Jan 92 p 11*

[Text] Dr. Annop Khunawongkrut, as associate professor with the Faculty of Veterinary Science, Chulalongkorn University, and an academic who has monitored the disease situation, said that after the outbreak of this new hog disease, it was found that this was PRRS, or blue ear disease. This has done great damage to the hog rearing industries in other countries. There is no known treatment for this disease. People in Thailand who raise hogs are very concerned about this. This is true for people in both the public and private sectors. Academics are trying to find a way to prevent this disease from spreading to Thailand.

"For Thai farmers, it's good that everyone is cooperating. Those who raise hogs have temporarily stopped importing hogs from abroad. They are doing this on their own. The state hasn't had to pass a law to force them to do this. Thus, it will be difficult for this disease to spread to Thailand if everyone continues to cooperate like this," said Dr. Annop.

**Cattle Shipments Spread Hoof and Mouth Disease**

92WE0277A Bangkok DAILY NEWS in Thai  
18 Jan 92 p 9

[Text] Mrs. Chintana Danwiwattaphon, the Singburi provincial livestock officer, said that Thailand is now experiencing severe problems with hoof and mouth disease in cattle, buffaloes, and hogs. This poses a serious obstacle in exporting livestock. The Livestock Department has implemented a program to develop livestock for export. It has promoted the establishment of livestock sales markets. During the period 1989-1990, livestock were moved from one province to another throughout the country. At the same time, it was found that hoof and mouth disease spread from one place to another very rapidly, with the result that there is a widespread epidemic. A large number of animals are sick. The movement of livestock from one place has led to the spread of this disease to various places.

Singburi Province is one of the provinces that raises and sells large numbers of cattle. The farmers buy cattle from one place and move them elsewhere without taking any precautions to prevent hoof and mouth disease. Thus, in order to control this disease and prevent this disease from spreading to Singburi and other provinces, the Singburi provincial livestock office has implemented a program "to improve efficiency in controlling and eradicating hoof and mouth disease." It has set up livestock inspection checkpoints in every district in order to vaccinate the cattle brought into and taken out of the province.

Mrs. Chintana said that these checkpoints will be set up in January and February 1992. The people will be given advice on the steps involved in moving cattle, and public relations activities will be carried on so that they act in accordance with the rules and regulations. Those who want to ship cattle from one district to another must obtain a permit from the district livestock office (the services for this are free). Before the livestock can be moved, they must have been vaccinated first. Officials will vaccinate them and keep them for 10 days (in order to increase their resistance). Only then will they allow the livestock to be moved. In cases in which livestock have been brought in from somewhere else and they have not yet been vaccinated or there is no livestock shipment permit, the officials at the checkpoint will issue a warning and tell those concerned that they must obey the regulations. They will vaccinate the animals and issue a shipment permit free of charge. But they will record the fact that a warning has been given. During this grace period, which will last until the end of February, violators will not be arrested or charged. Officials will begin arresting people and taking resolute action beginning on 1 March. There is an exception, however. During this grace period, if it is found that someone who has been warned again violates the regulations, officials will turn him over to the police for further handling of the case.

**VIETNAM**

**Malaria Infected 45,000 in Son La in 1991**  
BK0703133592 Hanoi Voice of Vietnam Network  
in Vietnamese 0500 GMT 3 Mar 92

[Essay by Thu Hien]

[Summary] "According to statistics provided by the Son La Provincial Public Health Office, 45,000 people were infected with malaria in 1991 with 18 epidemic and over 300 reported dead. This death toll has raised the alarm of not only the provincial but also the national public health sector."

The administrations at various levels and the public health sector of Son La have promptly rectified their activities and learned from these experiences. The following have been cited as the causes of the above situation:

"The province did not have an antimalaria steering committee. The ratification of its malaria control plan lacked coordination from the various sectors and echelons and this adversely affected the results of their work. The majority of districts and towns in the province were still dependent on funds from higher echelons in fighting malaria epidemics, even when the outbreaks were ravaging their localities. The supply of commonly-used medicine from the central government, though an allocation, was far below actual requirements. The majority of malaria-stricken victims had no medicine and none was available for purchase. If there had been, they would have had to buy it at exorbitant free-market prices."

In addition to the ravages of floods, the environmental upheavals caused by displacement of people from the Da River Basin and by the gold rush at the border have also been also responsible for aggravating the epidemics.

"Son La held a conference on 25 and 26 February to launch its 1992 malaria control activities. This conference, although held when it was experiencing socioeconomic difficulties, received the attention of the Council of Ministers, the Ministry of Public Health, and the Institute of Malaria Parasitology and Entomology. The conference discussed and unanimously agreed on its 1992 action program which calls for a drastic change to improve the province's malaria situation, cutting the number of epidemics by more than 50 percent compared to that of preceding years, minimizing deaths, and reducing the infected population."

It is reported that "the Ministry of Public Health has decided to allocate over 800 million dong for its antimalaria control program this year. In February, the province spent over two million dong on this program. Immediately after the conference, the Public Health Office and the Malaria Control Station of the province gave 230 million dong in cash, medicine, and chemicals to various districts for the program launch."

In addition, "35 mobile antimalaria groups staffed with 170 health cadres have also been formed to serve 74 villages frequently hit by malaria epidemics."

With a high determination and adequate funds, Son La will certainly achieve its 1992 antimalaria objectives.

### **Major Anti-Malaria Campaign Launched in Nghe An**

*BK1803144792 Hanoi Voice of Vietnam Network in Vietnamese 0500 GMT 15 Mar 92*

[Text] The province of Nghe An has initiated a malaria prevention and control campaign. Participating were more than 1,000 doctors and physicians, including 40 highly qualified and well experienced doctors from the Army Medical Department under the Ministry of National Defense. The department has also donated 24 million dong to cover the cost of special anti-malaria drugs. In addition to a 200-million fund provided by Nghe An Province, the campaign also received 600 million dong from the central government.

As an immediate objective, doctors and physicians have already been divided into 11 groups and assigned to six mountain and five midland districts where they have joined hands with local public healthcare workers in spraying mosquito-killing substances, in applying mosquito repellent to mosquito nets, and in examining and treating patients.

This is the largest and most expensive malaria prevention and control campaign ever initiated by Nghe An Province.

### **Malaria Kills 140 in Ha Tinh Province**

*BK0304091192 Hanoi Voice of Vietnam Network in Vietnamese 1100 GMT 23 Mar 92*

[Text] One of the issues of most concern at Ha Tinh is the quick spread of malaria. According to the initial data, 121 out of 260 villages with 560,000 people or half of the province's population, live in malaria-infested areas.

In 1991, 28,600 people in Ha Tinh were infected with the disease, including 1,200 people with acute malaria and 140 deaths. The problem is that malaria affects the districts in the mountains and the plains.

In Ha Tinh Township, 500 people are being treated so far. The province's health and finance sectors has held an urgent meeting to discuss measures to train health workers and to provide more facilities and medication for villages affected by the epidemic.

The provincial health sector with the assistance of the Institute for Malaria and Parasitology has also held a meeting for nearly 100 leading cadres and doctors on malaria prevention. The province has also set up 10 revolving teams with 50 health workers to spray DDT and soak nets with anti-mosquito liquid.

### **Government Provides Aid To Fight Malaria Epidemic**

*BK2903090192 Hanoi VNA in English 0608 GMT 29 Mar 92*

[Text] Hanoi VNA March 29—In 1991, 101 malaria epidemics occurred through the country, killing 2,789 and affecting 15,604 others.

In response, the government provided 10 billion dong in the first quarter of this year for anti-malaria programmes to be implemented in various provinces.

By mid-December 1991 in the mountain border province of Son La, one of several provinces severely affected by malaria (the others include Nghe An and Darlac), 4,000 persons had contracted malaria, and 290 of them died. These provinces are the top priority for money and vaccinations to combat malaria. Workers in the rubber, construction, communication and transportation sectors who are in severe malaria areas will also receive priority from the national anti-malaria programme.

Early this year, in the central coastal province of Nghe An, which suffers the highest mortality rate, a number of health units including the army took part in spraying mosquito insecticides and in treating patients in the districts of Que Phong, Qui Chau and Tuong Duong.

Last January, no epidemics were reported anywhere.

## REGIONAL AFFAIRS

### Caribbean Epidemiology Center Report on Cholera

FL2802201692 Bridgetown CANA in English  
1956 GMT 28 Feb 92

[CANA editorial note: "Report presented by the Caribbean Epidemiology Center"]

[Excerpts] Port of Spain, Trinidad, Feb 28, CANA—In the midst of the HIV/AIDS epidemic, another is threatening to hit the Caribbean. It is cholera, which in the last 13 months, has swept across South America, infecting tens of thousands of adults and children. Cholera has in fact, reached the Caribbean. Three cases have been reported in Belize, one of CAREC's [Caribbean Epidemiology Center] member countries.

Before the outbreak in Peru in January 1991, cholera to people in the Caribbean was just another in the many diseases that had been heard of distantly for many years. During the past year, the Caribbean Epidemiology Centre (CAREC) has been advising member governments that the importation of the disease to the region should be regarded as inevitable and likely to remain endemic in all of the Americas (Latin America and the Caribbean) for at least a decade.

How the people of the Caribbean will respond to cholera is yet to be seen. Already, some of the responses have run the gamut of extremes, from fear and panic to apathy, when what is critical to both prevention and spread of cholera, is adherence to basic principles of personal hygiene, and ensuring that the environment, particularly living surroundings, are sanitary and healthy. [Passage omitted]

Of critical importance, is the care that should be exercised in purchasing food from street vendors, particularly drinks containing ice. For instance in Peru, where the outbreak occurred in January 1991, the main risk factors were identified as the drinking of unboiled water from municipal systems and shallow wells, consumption of food and beverages sold by street vendors especially drinking beverages containing ice; eating of food left for more than three hours at room temperature without reheating, and drinking water from a container into which other people had put their hands.

Within a month approximately 77,000 persons were infected in coastal communities of Peru. Up to mid-December 1991 there were 301,277 reported case and 2,840 deaths. The caseload is now approaching 400,000 at the time of writing.

Consumption of raw fish or shellfish, plus drinking beverages from street vendors were identified as the major risk factors in Ecuador where there were 43,000 reported cases, many of whom were among shrimp fishermen. There were approximately 636 deaths.

The disease starts with a sudden onset of profuse watery diarrhoea with occasional vomiting which can lead to dehydration, circulatory collapse, and even death. In fact, up to half of the untreated cases of severe cholera, die from dehydration. A person with severe cholera can lose between two to five gallons of body fluid per day and can succumb to death within hours.

Cholera, when full blown, is known to be the fastest cause of deaths. It should be noted however, that 90 percent of the cases are mild and not life-threatening and when properly treated, is not fatal. The 3,800 deaths from cholera in the first 11 months of 1991 represent a small contribution to mortality from diarrhoea even among adults.

Each year in Latin America, about 240,000 adults die from intestinal infectious diseases and 300,000 children under the age of five years, from diarrhoea. Early case finding and prompt notification by physicians is essential to effective public health responses to cholera.

As a result of Oral Rehydration Therapy (ORT), cholera mortality has dropped significantly to 1 percent or less. This has been reflected in the South American experience in 1991 with a case fatality ratio of 1 percent. However, Bolivia had a higher fatality ratio of 7 percent, but this was due to a delay in administering ORT. [Passage omitted]

Cholera poses a new threat to public health in the region. If its spread is not prevented, additional burdens could be placed on the respective governments in the Caribbean in the deployment of already limited financial, physical and human resources to health care services.

It is not deaths alone that make cholera important, but also the tremendous demand on the health services to prevent fatalities. The high rate of reported cases in South America stands as a warning to all in the Caribbean. It is, therefore, incumbent on all regional people to take personal action by practising basic and well known methods of hygiene in an effort to prevent the spread of the disease.

### Health Ministers Issue Declaration on Cholera

PY2902114492 Buenos Aires NOTICIAS  
ARGENTINAS in Spanish 1923 GMT 28 Feb 92

[Text] Buenos Aires, 28 Feb (NA)—Top health officials from nine South American countries decided today in Buenos Aires to set up a ministerial coordinating committee for the struggle against cholera that will draw up an "overall strategy" capable of dealing with this scourge in the region.

This is stated in the "Declaration of Buenos Aires" signed today by the health ministers of Argentina, Bolivia, Brazil, Colombia, Chile, Paraguay, Peru, Uruguay, and Venezuela after two days of talks.

The ministers indicated that this declaration was prompted by "the constantly spreading cholera epidemic present in several countries of South America and the rest of the continent."

The ministers also warned that cholera "is very likely to remain in the region as yet another component of the serious problems that diarrhea-causing diseases are bound to create for all countries until basic sanitation facilities are developed."

The ministers went on to say that "cholera is a challenge for the entire region and not a problem indigenous to one or a few countries," and announced they will propose to their respective governments "an overall, integration-seeking strategy" to deal with the problem.

The declaration added that a technical meeting will be held in Bogota, Colombia, on 23 and 24 March. Argentine Health and Social Action Minister Julio Cesar Araos explained that the governments of North America will be invited to participate in this meeting.

Among other things, the declaration's signers will seek to agree on standard regulations for cholera prevention and control and on ways and means to strengthen bilateral and multilateral mechanisms for the exchange of information.

The declaration also called for joint bilateral or multilateral preventive actions along the borders and for common efforts to obtain the assistance of multilateral technical and financial cooperation agencies.

The financial aspects of the continent-wide anticholera campaign were treated separately in the declaration, which recommended a meeting with the main international assistance and credit organizations "as soon as possible."

At this meeting the South American representatives will ask for "intense, immediate assistance using the agencies' own funds to draw up preventive programs" and "broad programs to finance" water supply and sewage systems in the region.

At the meeting's end, Minister Araoz said that the initiative of Latin American countries to deal with the cholera problem jointly was "excellent" because, he stressed "it is a continental issue."

Araoz recalled that "cholera began its death trek in Peru but it is arriving in all the countries and we have to try to stop it."

The minister insisted on the need to obtain international funds "because one cannot fight cholera unless one understands that it is the consequence of poverty and that we must reduce the number of neglected people in Latin America."

Commenting on the political and financial causes of this neglect, Araos stated: "We have warned our governments that unless a balance is achieved between the

payment of the foreign debt and investments, poverty is bound to grow and so will cholera, along with other social diseases."

The minister added: "It is not the case of resorting to the old plaintive approach, that is, crying and refusing to pay the debt. Neither is it a question of applying hasty solutions."

He concluded by saying: "Latin America's attitude is too mature for such attitudes, but we are also aware that social diseases cannot be eradicated unless we do away with poverty."

## ARGENTINA

### State Oil Company Has Successful Anti-Cholera Campaign

PY2003032792 Buenos Aires BUENOS AIRES HERALD in English 19 Mar 92 p 9

[Article by Carlos A. Pefaur]

[Text] Tartagal, Salta— So far, 90 percent of the country's cholera cases have been in the province of Salta, more precisely along the Pilcomayo and Bermejo rivers and in San Martin. In the middle of this cholera epidemic area is the state oil company YPF's Yacimiento Norte (North Basin area), whose workers with their families total 9,750 souls. Thanks to the preventive measures the company has been taking for the past year, they have not contracted the disease. Which makes YPF's Salta operations appear an "island" in a sea of cholera.

The success of the anti-cholera campaign lies in preventive medicine and taking pains to maintain hygiene, says Dr. Jose Carrion Rojas, director of YPF's Vespucio Hospital in the camp of the same name servicing the North Basin 7 km from Tartagal. The preventive measures have been coordinated with the Tartagal Hospital, where Salta's Anti-Cholera Control Centre is based. They consist basically of house-by-house visits in towns where YPF employees live (Campamento Vespucio, Salvador Mazza, Aguaray, Tartagal and General Mosconi), in which authorities inspect the living conditions of each household and advise on how to avoid contracting the disease.

Dr. Rojas says that the chances of YPF personnel getting cholera are very slim owing to their living standards. For instance, he says, the quality of the water at YPF's Campamento Vespucio is one of the best in the region, as it is constantly chlorinated and monitored. The risk areas are on the outskirts of the camp, where the very poor live.

Dr. Reinaldo Muruaga, anti-cholera campaign coordinator of the Vespucio hospital and hospital representative on the Tartagal-based Anti-Cholera Consultative Board (formed by national, provincial and municipal officials), recently was commissioned by YPF to carry

out a survey in the Pilcomayo River area with a group of nurses, and the resulting report was presented to the Tartagal authorities.

The Vespuco Hospital has several infirmaries in the area where YPF operates, among which is Palmar Largo in the province of Formosa near the border with Salta, which has been specially equipped to deal with cholera cases in an isolated Chaco region with Indian settlements which increase disease risk. The only way to get to Palmar Largo is by plane. The people who work in this miniature town are provided with mineral water to drink and the meals they are served leave out fresh fruit and vegetables. The petroleum YPF pumps at Palmar Largo is sent to the Campo Duran refinery.

As an added preventive measure against cholera, YPF's Labour Medicine Department ruled that before being flown to the city of Salta for rotation, all workers at Palmar Largo and Tineo (Salta) must don clean clothes and undergo an hour of quarantine at the airport.

Horacio J. Sole, administrator of the North Basin, says that with the detection of the first cholera case on February 6, 1992, YPF established a special operative procedure to comply with the requirements of all national, provincial, municipal and other institutions of areas where the company operates.

The company provides municipalities with technical and logistical aid in garbage collection, ditch filling and street cleaning, flies doctors, nurses, medicines and food to cholera areas, and lends authorities its communications equipment.

To date YPF has spent 300,000 dollars in these community aid actions, as well as provided the fuel for operations.

"Here we are working," says Roberto Quinteros, administrator of the Campo Duran refinery, "knowing that the disease is out there just a few kilometres away. We don't know where it will strike next, as the refinery is just 20 km from the Bolivian border."

Quinteros added that YPF addresses the cholera problem on two fronts: in its relationship with its personnel in its manufacturing activities, and in its relationship with the community of which its personnel form part. In Campo Duran more than 400 Persons from YPF and private companies work at the refinery. These people come mainly from nearby communities such as Aguaray and Salvador Mazza (the latter being on the Bolivian border). Most live in Aguaray, where YPF controls the water and helps with road maintenance, among other tasks.

Given the proximity of the international tender which will sell off the North Basin, area residents are wondering what will happen when YPF pulls out, as the community work the company has been carrying out can hardly be taken over by the province of Salta, which is strapped for money.

Local mayors complained to the HERALD that the royalties the province pays them are a pittance, despite the fact that, as oil producers, they win for the province most of the royalties it receives from the national government.

#### Joint Campaign Against Cholera Planned With Bolivia

PY2304215292 Buenos Aires BUENOS AIRES  
HERALD in English 23 Apr 92 p 11

[Text] (DYN-NA)—The Argentine and Bolivian governments agreed yesterday to carry out a joint anti-cholera programme dubbed "Arbol II-Salud."

The accord, signed by Argentine and Bolivian Health Ministers Julio Cesar Araoz and Carlos Dadboud, includes the development "of anti-cholera activities, given the need for an answer to the health emergency" currently occurring in both countries since the cholera outbreak was detected.

The 15-article-long agreement states that both countries pledge to "draw up and adopt legal measures and direct public and private funds" to undertake bilateral programmes to improve sanitary conditions, running-water systems and waste-cleaning measures in border settlements.

The ministers also agreed to "limit and control public meetings that can endanger health safety in the area."

Included in the accord is the division of the areas worst affected by the disease into three zones that will include the towns of Tartagal, Yacuiba and Villamontes; Oran and Bermejo; and La Quiaca and Villazon.

A total of three commissions per area will work at "three different levels in the zones" to "control and protect people and the environment as well as to exchange information and carry out joint analyses and reports."

After the signing ceremony at the city's airport Araoz told reporters that "it is impossible to close down the border between Argentina and Bolivia."

Araoz added that "the cholera outbreak is slowing down" and that in the last week "only four cholera cases were detected throughout the country." A total of 320 cholera cases have been diagnosed in Argentina since the outbreak reached this province early last February.

## BRAZIL

**Pernambuco Cholera Figures Distorted**

*PY1003205492 Rio de Janeiro Rede Globo Television in Portuguese 1600 GMT 10 Mar 92*

[Speakers identified by screen captions]

[Text] Six people with cholera symptoms have arrived in Sao Paulo. These people arrived by bus at Tiete Terminal, where five buses were detained this morning. One of them arrived from Foz do Yguacu and the other four from the northeast. Among the passengers three adults and three children had cholera symptoms: vomiting and diarrhea. All six were taken to First Aid Hospital, and the buses were disinfected with chlorinated products and released for service.

Meanwhile, seven new cases of cholera have been confirmed in Sao Luis, Maranhao State. Thus, the capital of Maranhao State alone has 83 cases of cholera.

In Pernambuco State, the number of people admitted to hospitals with cholera symptoms is not reflected by local health secretariat figures. More and more people are arriving at hospitals in this state complaining of cholera symptoms. [Begin recording]

**Reporter Monica Silveira:** In Olinda, where the health secretariat reports no suspected or confirmed cholera cases, the First Aid Hospital received at least 20 people with cholera symptoms during carnival alone and referred them to one of the three state hospitals equipped to deal with cholera. Tests confirmed that three of these people had cholera.

At the Correa Picasso Hospital in Recife, there are always at least eight or 10 patients being treated for cholera. The Osvaldo Cruz Hospital treats even more cases, at least 30 a day. Last week, a person who had cholera symptoms died at this hospital, the third to do so recently. Two women admitted to this hospital and released last week were test-confirmed cholera cases. Both women live in Recife.

**Osvaldo Cruz Hospital Director Carlos Vieira:** The health secretariat confirmed to us that the two patients tested positive for cholera.

The Osvaldo Cruz Hospital rarely has less than 15 patients at any one time under treatment for cholera. The local health secretariat, however, is reporting only three confirmed cholera cases in Recife. According to official figures, there is not one suspected cholera case in the city.

**Pernambuco State Health Secretary Angela Valiente:** Not a single case has been confirmed. [as heard] I cannot even list them as suspected cases because there is no evidence of cholera-contaminated environments. [end recording]

**Rapid Spread of Cholera in Northeast Surveyed**

*92WE0373A Sao Paulo ISTOE SENHOR in Portuguese 18 Mar 92 pp 36, 37*

[Unattributed article: "Advance Notice of a Tragedy"—first paragraph is ISTOE SENHOR introduction]

[Text] Cholera is invading the Northeast and could reach our large urban centers as early as this month.

Its arrival was delayed by a little more than a year, but the terrible predictions of the spread of cholera are already a reality in Brazil. "The nation is confronted with an epidemic, and outbreaks of the disease could occur shortly in our large urban centers," the new minister of health, Adib Jatene, declares. Even though it had been predicted and heralded, the speed with which Asiatic cholera broke out in the Northeast was unexpected. Within only two weeks from the beginning of Carnival, 1,180 cases (567 confirmed and 613 suspected) were reported in a total of 49 municipalities in six states—Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, and Pernambuco—including 13 deaths. As is the case with other problems in Brazil, sanitation and health policy have always been something entrusted more to the hand of God than to the hand of man. In this connection, the sarcastic comment of the Bahia State secretary for health, Otto Alencar, is very much to the point. "It is solely the protection of Our Lord of Bonfim that has spared Bahia from this disease," he declared.

Brazil today offers all the conditions necessary and favorable for a rapid advance of Asiatic cholera. Throughout Brazil the overall picture of basic sanitation is cause for alarm, to say the least. More than half of Brazil's municipalities do not have one of the four essential sanitation services: running water, a sewer system, street cleaning, and trash collection. Even in the large cities the situation is alarming. In Salvador—the third largest city in Brazil, according to the IBGE [Brazilian Institute of Geography and Statistics]—one can get an idea of how good a job Secretary Alencar's Lord of Bonfim is doing. Half of the city's 3 million residents drink water that is completely untreated, and there are virtually no sewer systems anywhere in the state of Bahia. In Pernambuco the situation is no different. According to a survey carried out in 1990, two-thirds of the state's 7.5 million residents have no access to drinking water and only 12 percent of the residences have a sewer connection.

It was against the background of these public health conditions that the WHO last April—when the first case of the disease was recorded in Tabatinga, on the border with Colombia—estimated that 3 million individuals would be infected by December and as many as 1.5 million might die. The figures at the Ministry of Health, however, persistently showed that the disease was far from being out of control. Identifying as cases of cholera only those confirmed by laboratory tests, the official reports listed 1,567 cases—including 26 deaths—in the entire year of 1991. This year—still according to the

same system of reporting—663 cases of cholera with no deaths were reported up to 14 February, at which time controversy overtook those responsible for the statistics on the disease's progress.

By decision of Health Minister Jatene, all cases of diarrhea involving residents of endemic areas who were over the age of 10 were reclassified as cases of cholera. The official figures accordingly shot up to 1,988 for last year—including 33 deaths—and to 1,406 for this year, including 20 deaths. On 5 March Jatene issued a report listing 1,606 cases, including 21 deaths. "This increase was caused by the entry of cholera into the Northeast," Jatene said. "The new system of reporting such cases offers the advantage of quick action to save lives and also brings to the fore the problem of diarrhea in Brazil," argues Epidemiologist Claudio Amaral, the new chairman of the National Anticholera Campaign Committee. The new formula for recording these cases did, however, serve to expose the differences existing between two groups within the Health Ministry. The reformulation of the figures for 1991, incidentally, was possible only because there were technical experts on the committee itself who—in the exercise of their parallel authority—prepared secret reports in which they also classified cases of diarrhea in the endemic areas as cholera.

This difference of opinion surfaced on 9 March with the death in Recife of 15-year-old Ricardo Miguel Silva Almeida. The boy had been in perfect health the day before. He had played soccer with his friends in the Favela [Shantytown] do Canal, situated in the same Agua Fria region that was the home of the vendor Jose Severino, the first person to die of cholera in the city. After eating lunch Ricardo began to vomit and to manifest the symptoms of diarrhea. At 0200 his father, Ricardo Roberto de Almeida, a watchman, took him to Agamenon Magalhaes Hospital, where by 1000 the boy was dead. All the symptoms were quite unambiguous: Ricardo was a victim of cholera. "The doctors explained that the casket could not be open and that Ricardo's body would be enclosed in a plastic bag together with the bed linen in order to avoid contamination," the father said. The Pernambuco State Secretariat of Health nonetheless refused to report the cause of death as cholera because the results of the laboratory tests were not conclusive.

Angela Valente, Pernambuco state secretary of health, justifies her cautious attitude by maintaining that tests of the water in the canal that runs through the favela were negative and that the region could not therefore be regarded as host to the endemic. "There has been no cholera for more than a century, and the medical schools do not even teach their students about it," she argues in rebuttal to criticism of the fact that cases such as Ricardo's have not been included in the statistics compiled by the state, which are increasingly at variance with the figures announced in Brasilia. Meanwhile, the three hospitals in Recife to which these cases are referred continue to receive an average of 30 patients per day

with cholera symptoms. As in 1855, when 32,586 deaths from the disease occurred in Pernambuco Province, the vibrio bacteria arrived from the interior. This time the principal focus of the disease is the small municipality of Bezerros, 110 km from Recife, where 245 cases—including two deaths—had been recorded as of Tuesday 10 March. The water in the state's principal river, the Ipojuca—which is 250 km in length and traverses 14 municipalities—is also contaminated.

Fishing and bathing in the Ipojuca River has been banned, but many persons are simply unaware of the ban issued by the public health authorities. "We have always had a great deal of difficulty, throughout Brazil, in making the public understand the seriousness of this disease," declares Ana Rosa Santos of the National Epidemiological Center. In fact, soldiers have had to be stationed along Bodocongo Creek in Campina Grande, Paraiba State, to prevent people from using the water in the creek. In November of last year—even after it was confirmed that the soldier Mauro Nei Maciel Martins had cholera and that the waters off Sao Bento Beach on Ilha do Governador were contaminated by vibrio bacteria, the local residents continued to bathe there despite all the warnings by the public health authorities of the City of Rio de Janeiro.

Since then two more cases of cholera have been recorded in Rio, both of which were "imported": Lieutenant Colonel Nilo Paulo Moreira, who probably contracted the disease in Belem, and retired Corporal of Military Police Francisco Dutra da Silva, who first experienced the symptoms in Manaus. To prevent the cholera from spreading, the Rio de Janeiro municipal and state health secretariats began to inspect all buses arriving from the states of the Northeast and to intensify their vigilance at ports and airports. The same measures have been adopted in Sao Paulo, where 168 suspected cases were reported in 1991 and an additional 81 cases between 1 January of this year and last Tuesday. The only confirmed case was that of an Ecuadorian who had the disease when he arrived in the city in June of last year. Vigilance remains strict, nonetheless.

Every day approximately 5,000 passengers arriving on a total of 150 buses are inspected at the entrance to the Tiete Bus Terminal. The buses are checked by doctors and employees of Socicam (the company that operates the terminal), who interview the driver and the passengers. It is usual for people not to tell of their symptoms, out of fear or embarrassment. That is what happened, for example, in the case of the Bahian Julieta Pereira Borges, 40, who is the mother of 13 children. She traveled to Sao Paulo to visit a brother and planned to remain in the city during the entire month of March. She was taken to the emergency hospital in the Santana district of the northern part of the city, where she received medication and underwent all the tests. There she explained that in her home—which has no sewer connection—everyone drinks only well water. And she summed up to perfection her lack of information about the risk involved in her

attitude. "I've heard a lot of talk about this thing they call cholera," she said, "but I don't know what it is."

## CUBA

### Epidemiologist Denies Existence of Cholera in Cuba

*FL0804023092 Havana Radio Rebelde Network  
in Spanish 2300 GMT 7 Apr 92*

[Excerpts] The mobile unit is resting, conserving fuel, but [mobile unit reporter] Heidi Gonzalez Cabrera is here in the studio to discuss an extremely important topic—cholera prevention—through her interview with Dr. Vicente Garcia Gomez of the Vice Ministry of Hygiene and Epidemiology.

**Gonzalez:** [passage omitted] Precisely, right now, when the entire world is alarmed over the presence of cholera, an everlasting scourge of humanity, we need merely continue our measures aimed at preventing it from striking us, and take effective action any time it should become necessary.

Dr. Vicente Garcia, a specialist from the Vice Ministry for Hygiene and Epidemiology, will inform us regarding this pandemic. Good evening, Doctor.

**Garcia:** Good evening.

**Gonzalez:** I would like to start this interview with you giving the general guidelines we should convey to our listeners.

**Garcia:** Well, in the first place, as you just said, up to right now as we speak, our country has not had a single case of cholera. [passage omitted] We have prepared a prevention program in every municipality of every province. Medical personnel have been trained and seminars have been held. [passage omitted]

**Gonzalez:** Doctor, I think perhaps these measures that have been taken in Cuba to prevent any outbreak of such an epidemic in our country are what have given rise to some kind of confusion regarding the imminence of the disease. [words indistinct] the calls have shown [words indistinct] and many people are even worried about whether they should [words indistinct] fish, if they should fry it, and things like that. There have been a number of measures, but I think they are already adapted exactly to the appearance of this illness. What do you say about this?

**Garcia:** No, I repeat, in our country, we do not have....[rephrases] We have not yet had the first report of a cholera case. Therefore, it is not necessary to take such measures. [words indistinct] guidelines that we give every year regarding acute diarrheal illnesses in general, because diarrheas are endemic in our country, and we have epidemic periods, connected with certain seasons of the year in which there is an increase of diarrhea. So

we instruct people at those times. We ask them to boil the water, boil the milk, increase breast-feeding, and so forth. So there is a series of hygienic measures that we always recommend that, in addition to this, are valid against cholera. But that is all it is. It is just what we have [words indistinct] [passage omitted]

## DOMINICAN REPUBLIC

### Havana Reports Typhoid Outbreak in Dominican Republic

*FL1903202192 Havana Radio Rebelde Network  
in Spanish 1800 GMT 19 Mar 92*

[Text] A state of emergency has been declared in the northern section of the Dominican Republic due to an outbreak of typhoid fever which so far has caused 15 deaths.

### Moca Residents Demand Aid To Fight Typhoid Epidemic

*FL2003174192 Santo Domingo Cadena de Noticias  
in Spanish 1600 GMT 20 Mar 92*

[Text] The people of Moca are denouncing the situation and protesting the typhoid fever outbreak, which has been affecting the area for a week.

Yesterday, thousands of candles illuminated the main streets of Moca, including Rosario and Presidente Vasquez Streets, among others. There was also a public rally in Duarte Park with speeches by Radames Mercedes, on behalf of the Bloc of People's Organizations, and Francisco Arias, on behalf of the Committee for Water.

Eleven people have died and many others have been afflicted with typhoid fever. The government has announced efforts to control the outbreak.

Cadena de Noticias correspondent Lourdes Rosario reported from Moca that the police did not intervene and that no incidents occurred during the candle lighting or the rally in Duarte Park.

### Measles, Typhoid Fever Kills 16 People in Northeast

*FL1604195992 Santo Domingo Cadena de Noticias  
in Spanish 0930 GMT 16 Apr 92*

[Text] So far this year, 16 people have died in the northeastern region as a result of measles and typhoid fever outbreaks. Dr. Luis Dominguez Garcia, president of the northeastern branch of the Dominican Medical Association [AMD], described the situation as distressing. Dominguez said that the hospitals in the region do not know what to do since they do not have medications to combat the epidemics. The AMD official called for urgent intervention by the government as soon as possible to fight the epidemics in the northeastern region.

**Tomato Crop Threatened by Virus, White Fly**  
92WE0300A Santo Domingo *EL SIGLO* in Spanish  
30 Jan 92 p 7B

[Article by Marino Zapete C.]

[Text] According to the experts involved with the Integrated Plague Management (MIP) program, the domestic tomato agroindustry is seriously threatened. Engineer Porfirio Alvarez, the national coordinator of the MIP; Professor Abraham Abud; and phytopathologist Julio Borbon made this information public yesterday noon.

They explained that the damage suffered by the tomato and melon crops is not due exclusively to attacks by the now-familiar white fly, but to the presence of another insect of the same species and a virus called Geminnis, as well.

The new white-fly strain, known as Type B, was identified recently by expert plant virologist Judith Brown, the professionals at the MIP reported.

This plague is more of a problem than the only strain known in this country until a short time ago. This is because it attacks a wider variety of crops, is much more aggressive, and has a greater capacity to infect plants with the virus.

The MIP experts estimate that the new insect plague has the capacity to do half again as much damage as the strain known previously, which creates a serious situation for the Dominican agricultural sector.

As is the case with any recent discovery, there is not as yet any proven method of combating the strain known as Type B. This fact constitutes another very serious difficulty.

A similar situation exists with the Geminnis virus, which causes a disease the MIP experts regard as mainly responsible for the recent attacks to which the tomato and melon crops in the Azua Valley have been subjected.

The Geminnis virus might be produced by this same white fly, but the experts do not exclude the possibility of other forms of reproduction.

The specialists gave this reporter a copy of a document which states the following: "The combination of the presence of the new white-fly strain and the new virus found in tomato plants constitutes a threat to the tomato agroindustry in the Dominican Republic."

This situation has provoked great concern, because the Dominican Republic is one of the leading producers of tomatoes in the Caribbean area. According to the available figures, the southern zone alone has more than 55,000 tareas planted to this crop.

The document provided by the MIP experts says that the steps taken by the Secretariat of State of Agriculture to deal with the problem of the white fly "have not been characterized by the necessary continuity, and this has

permitted the virus to spread rapidly, resulting in sizable losses in this year's harvest."

In order to deal with the problem, they suggest that Secretariat of State of Agriculture Resolution 44-90, which restricts the planting periods for the crops which serve as hosts to the white fly, be implemented.

They believe that planting should be prohibited between 15 April and 15 August, and that tomato plantings should be carried out between 15 August and 31 October.

Where melons are concerned, the MIP suggests that they be planted each season between 15 December and 15 January.

In addition, the MIP recommends regulation of the import of seedlings of crops which serve as hosts to the white fly; a ban on domestic traffic in tomato-plant materials from one region to another; and a prohibition on the establishment of seed nurseries in the open countryside within the areas affected by the virus.

The MIP also suggests that a series of crop measures be adopted; that a phytosanitary inspection system be established; that certain chemical controls be used; and that a series of studies be carried out on the problem.

## GUATEMALA

**Cholera Cases Total 200 in Atitlan**

92WE0304A Guatemala City *EL GRAFICO* in Spanish  
9 Feb 92 p 5

[Excerpt] There are 200 cases of cholera in Santiago Atitlan, Solola, according to the mayor, Mr. Salvador Ramirez, who said that the patients are receiving the appropriate treatment.

So far, thank God, he added, no one has died of the disease, but at the moment 200 persons are suffering from it.

The cholera sufferers are inhabitants of the town, said the mayor, and they are receiving treatment in order to avoid loss of life and to prevent the spread of the disease.

Ramirez said that the regional health center as well as other persons are helping to provide treatment for the sick. [passage omitted]

**Cholera Strikes Three Towns in Solala**

92WE0354A Guatemala City *PRENSA LIBRE*  
in Spanish 5 Mar 92 p 26

[Article by contributor Edgar Rene Saenz]

[Text] Dr. Jorge Muralles, chief of the health area, reported that the death of one person and 30 more stricken by cholera in San Pedro La Laguna, Solala, have caused fear among the region's inhabitants, because it is the third municipality in this department to suffer the effects of this epidemic.

He added that the cholera was spread after the inhabitants of San Pedro La Laguna opted to consume water

from Lake Atitlan, in view of the lack of drinking water caused by a break in a conduit.

He noted that, owing to this situation, the local authorities requested the intervention of the Public Health Ministry, which sent medicines and equipment to combat the most severe cholera cases. Meanwhile, trained personnel are making the pertinent recommendations to prevent the continued spread of that fatal disease.

In conclusion, he remarked that, unfortunately, a man who was a native of one of the Quiche municipalities, and who happened to stop by, died of cholera. However, he was buried immediately for fear that others might be infected.

## GUYANA

### Team Investigates Deaths Near Brazilian Border

*FL2503224492 Bridgetown CANA in English  
2144 GMT 25 Mar 92*

[Text] Georgetown, Guyana, March 25, CANA—Guyana's Health Ministry is investigating four deaths in a small Amerindian village near the Brazil border resulting from acute diarrhoea. Dr. Rudolph Cummings, the ministry's cholera chief, and a team flew to Kopinang Village, 28 miles from the Guyana/Brazil border, where initial reports suggested the deaths were from cholera. The disease is plaguing Latin and South America.

Blood samples of villagers affected by diarrhoea were taken for laboratory tests. The village, with a population of 617, depends on a stream running through it for washing and drinking purposes. It is accessible only by air.

## JAMAICA

### Minister Addresses House on Anti-Cholera Campaign

*FL1704192892 Bridgetown CANA in English  
1816 GMT 17 Apr 92*

[Excerpts] Kingston, Jamaica, April 17, CANA—As part of the Jamaica government's anti-cholera campaign, the parliamentary secretary in the Ministry of Education, Dr. Karl Blythe, has been temporarily re-assigned to the Ministry of Health. Prime Minister P.J. Patterson told the House of Representatives here that the move would enable Blythe to work with parliamentarians in the implementation of anti-cholera programmes in the island's 60 political constituencies.

"That assignment will remain until such time as we are satisfied that we have the machinery in the entire island.... to deal with the problem," Patterson said. And Health Minister Easton Douglas told the House that enhanced surveillance, the development of a comprehensive cholera preparedness manual, a public education programme, a travel advisory, funding and medical supplies had been put in place by the government in the face of the cholera threat.

Thousands of people have died as a result of a cholera epidemic in Latin America in recent years and medical experts say it will only be a matter of time before cholera reaches the English speaking Caribbean. [Passage omitted]

Douglas said a crucial new development was the preparation of a "travel alert card" which is to be handed to travellers arriving from countries where the disease is reported. The cards are intended to alert travellers and their doctors to the possibility of cholera if diarrhoea develops within one week of arrival.

The health minister said other measures included the training of health staff "at the local level" islandwide, increased public health inspection of eating places and education programmes for food handlers. Douglas said adequate medical supplies for an emergency response were in place but because of the high cost, it was not feasible to stock-pile massive supplies.

While financing had been identified from a number of sources, Douglas said more was needed particularly to replenish medical supplies and for environmental sanitation. He told the House that vaccination against cholera was not viable. He said the World Health Organisation (WHO) had said it was no longer required based on its lack of "effective protection."

The health minister said the most urgent task was to practise proper environmental sanitation in order to prevent the spread of the disease once it arrives.

## NICARAGUA

### Twenty-Six Cases of Cholera Reported

*FL2504160792 Havana Radio Rebelde Network  
in Spanish 1155 GMT 25 Apr 92*

[Text] On 27 April, a Cuban medical brigade will travel to Nicaragua to provide medical assistance for two months in areas affected by the eruption of the Cerro Negro volcano, which created a large number of injuries. The mission is composed of 14 health workers who will also cooperate in cholera control tasks. Until last week, Nicaraguan authorities had reported 26 cases of cholera. There are currently 84 Cuban health workers providing services to Nicaragua.

## BANGLADESH

### Malaria Becoming National Health Problem

92WE0333A Dhaka *THE NEW NATION* in English  
17 Jan 91 pp 1, 8

[Text] Malaria is fast growing into a major public health problem in Bangladesh with about 54,000 cases reported in 1990, according to Health Ministry sources. The number of cases is rising every year.

The problem is serious in South-East and Eastern districts where the disease has never been controlled.

These areas bordering India and Burma have become a major source of the countrywide resurgence of Malaria.

Sources said the sparsely populated forested hills are a reservoir of intense, unchecked malaria transmission from which the thickly populated alluvial plain that occupy most of the country have been continually reinfected. Presence of the characteristic breeding places in abundance, prevalence of a vector (An dirus) and persistent population migration to the greater Chittagong Hill Tracts further facilitate the transmission of malaria, the source explained the reason.

Sources said malaria eradication had succeeded to a great extent under the 1961-77 programme—which, however, faced a serious setback during the Liberation War—there were in the seventies signs of its return. The condition was aggravated by the importation of the disease through the returning refugees in 1971.

According to official statistics, the last three years—88-90—had recorded the highest incidence 50,738, 53875, 54000 respectively.

Officials are worried over the appearance of resistant strains of parasites to usual antimalarial drugs, growing rejection of use of DDT residual spraying especially by the tribal community. Some 70 lakh people of the tribal zone are exposed to malarial attack.

Sources said that malaria control strategy was being remodelled in view of change in vectoral behaviour of the vector mosquitoes. India and other countries of South East Asia are adopting new approaches like bioenvironmental control to control mosquito, thereby eradicating malaria.

Sources suggested that Bangladesh should also change its strategy to limit the problem and reduce the risk of resurgence of malaria countrywide.

### "Various Diseases" Kill 166 Burmese Refugees

BK0204161292 Dhaka Radio Bangladesh Network  
in English 1530 GMT 2 Apr 92

[Text] One hundred and sixty-six Rohingya refugees have died of various diseases at different camps where they have been sheltered after escaping from Myanmar

[Burma]. Diseases like diarrhea, acute respiratory problems, gastric, and gynecological diseases claimed the lives of these people.

### Diarrhea Claims 203 Lives in Five Southern Districts

BK2004165492 Dhaka Radio Bangladesh Network  
in English 1530 GMT 20 Apr 92

[Text] Medical teams have been working in five affected southern districts around the clock to combat the diarrheal diseases. UNB [UNITED NEWS OF BANGLADESH] quoting official sources said diarrhea has so far claimed 203 lives and affected over 12,500 others in Barisal, Patuakhali, (Jhalokathi), Firozpur, and Barguna Districts. Meanwhile, chairman of the Bangladesh Red Crescent Society, Sayeedul Haq Jamal, MP, visited some affected areas of Barisal District and handed over 100,000 purifying tablets and 20,000 oral saline packets.

### Press Reports on Spread of Fish Diseases

#### Ulcerative Syndrome Identified

92WE0328A Dhaka *THE NEW NATION* in English  
5 Feb 92 p 11

[Text] Patuakhali, Feb 3—Fish disease has broken out in an alarming proportion in almost all the areas of the district.

The disease known as ulcerative syndrome has been affecting fish like shing, koi, puti, magur, shoal, gazar, boal, taki and other local varieties in ponds and canals. The sea fish, as reported, are free from the disease.

The affected upazilas are Nesarabad, Nazirpur, Sadar, Bhandaria, Madhbaria, fishermen said.

The low income group of people who mostly live on fish are hard hit as they cannot afford to buy meat at an exorbitant price.

The local leaders have urged the authorities to spray lime water in ponds and other waterbodies to combat the growing menace.

#### Further Cases

92WE0328B Dhaka *THE NEW NATION* in English  
22 Jan 92 p 12

[Text] Chapainawabganj—A peculiar fish disease has broken out in an epidemic from in Sadar, Shibganj, Machol, Bholarhat and Gomostapur upazila of the district. About 10,000 fish are affected by the disease. The disease known as ulcerative syndrome, appeared about a fortnight ago killing different species like puti, bain, shoal, boal, gazar, taki, magur and shing. Fishermen said, the demand of fish had abruptly fallen in local markets causing financial loss to them. Nutrition experts feared that low income group of people who mostly live on fish are likely to suffer from protein deficiency following the outbreak of the disease. Local urged

the authorities to spray lime water in the affected water-bodies to combat the menace.

### Need for Study

**92WE0328C Dhaka THE NEW NATION in English**  
**13 Jan 92 p 5**

[Editorial: "Fish Epidemic"]

[Text] A fish epidemic has again broken out. Reports coming from different parts of the country highlight spread of the disease 'ulceritis' among different varieties of fish and sudden death of fish. Such accounts have been received from Pabna, Sunamganj, Sreemangal, Satkhira, Barguna, Bhairab and other places. People refuse to buy ulcerous fish although the authorities have earlier reassured that consumption of afflicted fish is safe. Fish traders failing to market the diseased fish fresh are drying them for sale as dried fish.

This is the third fish epidemic in four years. The phenomenon is nothing new but our zoologists and pisciculturists are yet to enlighten us as to the cause of the outbreak. When the outbreak first occurred, sample of the afflicted fish and water were sent to Bangkok for closer study. Even if a clue was found, the public was not kept informed but in all probability the study has drawn a blank. But this time our experts have suggested some kind of remedy—delivering lime and salt in the water. But this way only the fish of ponds can be saved, how is it possible to treat river water with these ingredients?

The damage to our fish resources from these periodic outbreaks is incalculable. Fish production is already too low at eight lakh tons against a requirement of 38 lakh tons. Fish is the main source of protein diet of the common people. Despite some efforts fish output could not be raised significantly. In this context the frequent outbreaks of fish epidemic pose a grave menace to our food supply and economy as a whole.

The phenomenon has also been experienced by India and Sri Lanka. We suggest that experts of these three countries put their heads together to find an effective solution which will depend on their ability to trace the cause. It is widely believed that environmental deterioration is the cause. If serious deterioration of the environment has resulted then fish will not be its only casualty. Since so much is at stake a serious effort must be made to halt the spread of the disease and save our fish resource. There is an unfortunate impression that the authorities have washed their hands of the problem.

### Fish Disease Epidemic in Brahmanbaria District

**92WP0200A Dhaka THE NEW NATION in English**  
**15 Feb 92 p 12**

[Text] Brahmanbaria, 13 February—Fish diseases have broken out in almost all the rivers, ponds and jalmahals of the seven upazilas of the district.

The diseases have assumed almost an epidemic form. As a result, the people of this area do not have adequate supply of protein and the members of the fishing community virtually became unemployed. They could not find out any ways and means to survive with the ancestral profession as government response to contain these diseases was not in sight.

The two big jalmahals of the district, namely Khaledia and Heila Beels, which were leased out to Paikpara Fishing Society by the government are the worst affected areas. Dead fish are seen floating on the water in these two big jalmahals on a large scale.

Moreover, fishes struggling against death are seen floundering on the surface of these jalmahals. Big fishes have been flocking in the brink of these jalmahals with their mouths wide open leaving their deep-water habitat.

Meanwhile, panic has grown among the people of this area regarding fish disease. They tend not to purchase any fish from the markets. Consequently, the agonies of the fishing community have multiplied.

It is gathered that about two hundred and fifty families of Paikpara Fishing Society exclusively depend on these two Jalmahals for their livelihood. Since then earnings have virtually come to a halt, the members of these families have been passing their days amidst much hardships.

Paikpara Fishing Society communicated the news of these diseases as well as their untold sufferings to the higher authorities but no preventive measures has yet been taken, it is alleged.

## INDIA

### Fight Against Malaria, Planned Statistics Released

**92WE0287A Madras THE HINDU in English**  
**20 Jan 92 p 3**

[Boldface words as published]

[Text] Madras, 19 January: The Madras Corporation plans to have a separate set-up for malaria control operations. This proposal comes in the wake of a record number of malaria cases reported during 1991.

As part of the plan, the anti-mosquito operations are to be delinked from the purview of the assistant health officers and brought under the control of the entomologist who can spend more time on supervision.

The assistant health officers also have to deal with routine health activities like general sanitation, control of cholera and other contagious diseases, collection of vital statistics and issue of licences for various trades. This results in low priority being accorded to mosquito eradication and malaria control.

The system to be adopted here is being followed by the Bombay Municipal Corporation and it will ensure better supervision, monitoring, guidance and assessment of the operations.

Under the proposed set-up, the post of senior entomologist at the Corporation's headquarters will be upgraded into that of Chief Vector Control Officer. Besides this, five senior entomologists will be made in charge of the operations in two circles each.

**Steep rise in incidence:** Against 51,272 cases of malaria recorded in 1990, the city registered a steep increase the next year and the figure stood at 66,937 cases—the highest in the last two decades. The incidence of malaria has been hovering around the 40,000 mark for the last few years. The previous highest was in 1985 when 51,376 cases were registered.

An alarming aspect last year was the steep increase in cerebral malaria cases, caused by plasmodium falciparum. There had been a gradual increase in the number of cases in the last couple of years.

In 1991, the cerebral malaria cases recorded was 8,022—a 204 percent increase over the 1990 figure of 3,921. Cerebral malaria often leads to mortality. The other type, which is not fatal, is caused by a parasite called plasmodium vivax. Madras accounts for nearly 60 percent of all malaria cases in Tamil Nadu.

According to Corporation sources, the new action plan to tackle this problem aims at integrated vector control management by liberally applying the modern techniques and adopting new strategies which will be cost effective, easy to implement and widely applicable.

**Ten pronged strategy:** The new 10-prolonged strategy includes source reduction, environmental modification and manipulation, biological control, effective enforcement of legislative measure, inter-sectoral coordination.

Till recently, the incidence of cerebral malaria was confined to the George Town area, and parts of Nochikuppam, Doomingkuppam and Tiruvanmiyur. It has now spread to other parts of the city.

**Increase in high rise buildings and construction activity without facilities for mosquito control, abnormal increase in the number of unprotected overhead tanks and wells, inadequate intersectoral coordination, and a shortage of one drug—Primaquin—for three months** are cited as reasons for the large number of malaria cases last year.

**Density to be reduced:** Corporation sources said that entomological studies had revealed that the adult vector mosquito, anopheles stephensi, had developed resistance to insecticides of chlorinated hydrocarbons like DDT. They were susceptible to organophosphorus compounds like Malathian. The density of adult mosquito was sought to be reduced by resorting to fogging operations mainly with Malathian and Pyrethrum.

The sources say that more emphasis is being laid on the anti-larval measures by resorting to spraying and fogging operations on all stagnant water sources. The problem can be controlled only with public support as there are about 70,000 wells, 45,000 overhead tanks and 56,000 cisterns in the city and only a fraction of them are mosquito proof.

## IRAN

### Illegal Immigrants Source of Malaria Spread

92AS0758E Tehran KEYHAN in Persian  
24 Feb 92 p 19

[Text] The minister of health, treatment and medical education considers the illegal Afghan and Pakistan immigrants as partly responsible for the spread of malaria. He made this statement in the national conference on malaria which began yesterday in Zahedan.

He said: Malaria in recent years has spread in many parts of the world, and it is feared that it will become epidemic once again. Criticizing the lack of action by the industrial countries of the world in fighting malaria, he pointed out that it is necessary for the countries suffering from malaria to cooperate to eliminate this dangerous disease. He added that malaria is still one of the gravest health problems of Third World countries, and that in some parts of Iran, as well, malaria is considered a health problem.

The minister of health, treatment and medical education then added:

One of the factors that has greatly affected the spread of malaria in our country is the illegal immigration of the Afghans and Pakistanis to our country. Also, climatic conditions and the cultural and social conditions of some of the regions contribute to the spread of malaria.

Dr. Seyfi, the secretary of the national conference on malaria, said to our correspondent: For five days, nearly 400 Iranian and foreign experts from 13 countries involved in world organizations will discuss malaria, from parasitology to ecology and the biology of malaria transmitters to organizations to fight malaria. Also, eight sessions to retrain physicians to deal with malaria as well as discussion sessions will be held.

In the first session of the conference, Dr. Sadrizadeh, the health deputy of the Ministry of Health, Treatment [and Medical Education], explained the strike force plan for fighting malaria in three southeast provinces of the country.

**ISRAEL****Malaria Outbreak Forecast Due to Immigration, Rainy Winter**

*TA0604142192 Tel Aviv HADASHOT in Hebrew  
6 Apr 92 p 11*

[Report by Ronit Morgenstern]

[Text] In the first three months of 1992, there were 100 cases of malaria in Israel, Rami Halperin, the chief engineer for environmental health in the Health Ministry, said yesterday. The Health Ministry expects an outbreak of hundreds of cases of malaria this year, due to immigration and the heavy rains this year, among other reasons.

Due to the rainy winter, there are now many bodies of water that could become breeding grounds for anopheles mosquitoes: in the north the rivers in the Galilee, HaYarmuk, the Sea of Galilee, and the 'Emeq Hula; in the south wells in the Dead Sea region and the Gaza Strip; and along the coastal region there are still pools of water in the areas of Ashdod, Ashqelon, Rishon Lezion, and possibly the Yarkon.

**MOROCCO****Epidemic of Salmonellosis, Meningitis**

*92WE0342A Rabat L'OPINION in French  
27 Feb 92 p 2*

[Article by A.R.: "Four Cases of Salmonellosis and Meningitis Reported"]

[Text] Information arrived yesterday reporting the existence of an epidemic in the obstetrics-gynecology ward of Mustapha hospital.

It seems that four cases of salmonellosis and one of meningitis were diagnosed some days ago.

The victims were newborns, and one of them has died. The same sources say the ward was temporarily shut down when the epidemic was discovered, then reopened after the situation was brought under control. This report, if confirmed, shows the laxity with regard to hygiene in our hospitals, particularly since the principal causes of these infectious maladies—salmonellosis, for example, which is generally the result of food poisoning—are carelessness in food preparation and poor sanitary conditions in the hospital environment. Contamination of unsterilized medical equipment and failure to disinfect the rooms of patients are both conducive to the spread of these diseases.

**SRI LANKA****Cholera Outbreak in Greater Colombo Area**

*BK2803115592 Colombo Sri Lanka Broadcasting Corporation International Service in English 1045 GMT 28 Mar 92*

[Excerpt] The ministry of health informed that there is an outbreak of cholera in and around Colombo. One of the two patients admitted to the Infectious Diseases Hospital at (Hangoda), the IDH, and the Colombo General Hospital has died. Four more patients suspected of cholera were admitted to the IDH yesterday. They are from Kelaniya, (Tattigoda), and Veragudalla in the (Bellampiti) area. Health ministry officials suspect that there are more patients with positive symptoms in these areas. [Passage omitted on steps to check further spread of disease and advice to the people]

### **Polymorphism of Clinical Manifestations of Lyme Borrelia Infection**

92WE0305A Moscow KLINICHESKAYA MEDITSIINA  
in Russian Vol 69 No 4, Apr 91 (manuscript received  
9 Nov 89) pp 68-70

[Article by Ye. P. Dekonenko, K. G. Umanskiy, L. V. Kupriyanova, Yu. P. Rudometov, I. Ye. Virych, and F. I. Bagrov, Institute of Poliomyelitis and Viral Encephalitis (director: S. G. Drozdov, academician of the USSR Academy of Medical Sciences), USSR Academy of Medical Sciences, Moscow; UDC 616.98:579.834.114]-036.1]

[Text] It has already been reported that Lyme-Borrelia infection [Lyme disease] (LB) is a new, recently identified disease that is transmitted by Ixodes ticks and widespread in the USSR [1, 3]. It involves a number of organs and systems—skin, nervous system, heart, joints, and others. LB develops in stages, each of which is characterized by involvement of specific organs in the process. At the first stage (an average of 10-14 days after attachment of ticks) one observes general infectious and cutaneous manifestations; at the second stage (after 3-4 weeks) there are neurological and cardiac disturbances, and at the third stage (after 3-12 months) the joints and ligament system are involved; there may also be further involvement of the skin and nervous system. A typical skin reaction in the form of tick erythema (annular hyperemia of the skin) develops at the site of invasion of the tick in many cases. Before LB was singled out as an independent nosological form, tick erythema and concomitant manifestations were viewed as one of the forms of tick encephalitis ("erythematous"). Erythema is such a typical clinical sign of LB that most researchers consider its presence to be sufficient grounds for making the diagnosis without specific immunological tests [4]. However, in far from all cases is tick erythema accompanied by the disease [8]. In a number of patients, the second and third stages of the disease may develop without the first one; in such cases, the diagnosis is made on the basis of the aggregate of clinical and epidemiological data and results of serological tests—presence of specific antibodies to the pathogen (*Borrelia burgdorferi*) in the immunofluorescence (RIF) test, enzyme immunoassay (IFM), and others.

In the Soviet literature there are few publications dealing with this disease [2, 3], and it remains little-known to most physicians of our country.

Our objective here was to describe the clinical manifestations of LB in the USSR at different stages of the disease.

We had 118 patients under observation, ranging in age from 2 to 72 years (average age 40 years); there were more men (72 patients). The disease was noted from April to October. Most patients came from the central region of European USSR, but there were also cases from other regions (Baltics, Siberia, Far East and others). Erythema appeared at the site of attachment of the tick at the acute period in 108 cases. The diagnosis of LB was made on the basis of typical clinical-epidemiological signs (attachment of tick, epidemiological history, erythema, and others). In some cases (35),

the diagnosis was confirmed by positive results from specific immunological tests (immunofluorescence, enzyme immunoassay). In 10 cases, where no erythema was observed, the diagnosis was made on the basis of rise in specific antibodies to the pathogen.

The first stage of the disease, the stage of cutaneous and general infectious lesions, was characterized by appearance of erythema, in the presence of which symptoms inherent in a general infectious process developed (or preceded the former). The incubation period from the time of attachment of a tick to the first signs of disease constituted a mean of 10 days, ranging from 1 to 53 days. Generalized infectious symptoms were observed in 92 (85 percent) out of the 108 patients. Elevated temperature, malaise, weakness, headache, muscle and joint pain, enlargement of lymph nodes and others were the most widespread signs (Table 1). Erythema was the chief and only sign of disease in 16 cases. In the vast majority of patients, erythema was manifested in the form of unbroken uniform infiltrate or in the form of a ring. In the case of infiltrate, diameter of erythema ranged from 5 to 20-30 cm. Upon reaching a maximum size, the dimensions of erythema remained unchanged for a long time. For example, we observed patients with persistent erythema for 3-4 months, without noticeable changes in its margins. Unlike infiltrates, the size of annular erythema usually increased as duration of illness progressed. It extended from the site of primary onset to the periphery (migrating erythema). Its diameter ranged from 5-7 to several tens of centimeters, involving half or more of the body. In this case, it was not annular, rather, it was in the form of bands. The outer erythematous ring was a zone of hyperemic skin 1-3 cm wide, which was not raised above the level of healthy skin. The central part of erythema was often paler in color. In the majority of cases (97), we observed solitary erythema. There were 2-11 or more erythematous zones in 11 patients. After disappearance of primary erythema, its recurrence was observed 5-12 days later in 9 cases.

Table 1. Clinical signs of first stage of LB in 118 patients

Manifestations of acute period	Number of cases	
	absolute	percentage
Temperature elevation	100	85
Malaise and weakness	76	64
Headache	62	53
Myalgia	35	30
Tenderness in region of erythema	33	28
Arthralgia	32	27
Local or extensive lymphadenopathy	29	25
Vertigo	20	17
Respiratory symptoms	10	9
Nausea, vomiting	9	8
Sleep disorders	8	7

At the first stage of the disease, temperature exceeded 38-39°C in two-thirds of the cases. Duration of fever

varied, and it depended on administered therapy: with specific therapy (antibiotics), temperature dropped after 1-3 days, and without antibiotics it lasted for 7-10 days to 1-2 months.

At the second stage of the disease, disturbances referable to the nervous systems were the chief signs (Table 2). Signs of nervous system lesions were observed in 66 (61 percent) out of 108 patients with tick erythema. Disturbances of the peripheral nervous system in the form of cervical, lumbosacral and thoracic radiculitis, radiculgia, plexitis, mono- and polyneuritis, and others, were the most typical. Serous meningitis and paresis of facial muscles were also not uncommon. Foreign researchers also report the frequency of such disturbances [6, 7]. The signs of serous meningitis (headache, nausea, vomiting, photophobia) were moderate. Severity of clinical manifestations of the meningeal syndrome (rigidity of occipital muscles, positive Kernig, Brudzinski signs, and others) ranged from mild to moderate. In most cases (23), serous meningitis was combined with other signs of nervous system involvement. There was a mean of 100 spinal fluid cells per microliter (ranging from 6 to 378); there were predominantly lymphocytic cells (70 to 100 percent lymphocytes in spinal fluid). Protein content was moderate, averaging 0.64 g/l, in the range of 0.264 to 1.65 g/l. There was a proportionate relationship between pleocytosis of spinal fluid and term of disease: an increase in cells occurred no sooner than 2-3 weeks after onset of the disease, and it progressed as the disease advanced.

**Table 2. Main neurological disturbances in LB cases**

Neurological disturbances	Number of cases	
	absolute	percentage
Radicular syndrome	47	71
Serous meningitis	25	68
Facial nerve neuritis	19	29
Cranial nerve disturbances (with exception of 7th pair)	36	55
Paresis of extremities	7	11
Cerebellar disorders	6	9
Nervous system disturbances	66	61

Note: Serous meningitis was found in 25 out of 37 patients whose spinal fluid was tested.

Some patients presented more gross nervous system disturbances in the form of paresis of the extremities, muscular atrophy, impaired reflexes, and others. The disease resembled meningoencephalitis in four cases.

Foreign researchers report frequent cardiac lesions at the second stage of the disease [9]. Such lesions may occur independently or be combined with neurological disorders. In some cases, lesions to the heart and its tunics were the cause of death [5]. Changes in the heart were characterized by dull tones, tachycardia, moderate conduction changes on the ECG. In view of the fact that

there were a number of elderly patients, these changes could also have been due to aging, and for this reason they cannot be interpreted unequivocally.

A total of 14 people were tested after recovering from the disease (6 months to 5 years later). In three cases there was recurrent arthritis, inherent in the third stage of the disease. Mainly the large joints were stricken: knee, ankle, elbow, etc. One patient had 12 recurrences of arthritis within 1.5 years; each recurrence was accompanied by high fever, intoxication and other signs. The joints were enlarged, edematous, and the skin over them was hyperemic; motion was limited and painful. Duration of recurrences varied, ranging from 2-3 days to 1-2 weeks.

Specific antibodies to the pathogen using the indirect RIF and IFM were assayed in 45 patients at different stages of the disease. Positive test results were obtained in 62 percent of the cases. Antibodies to the LB pathogen usually develop no sooner than the third week of the disease, and for this reason there are none at the erythematous stage of the disease in most cases [5].

LB was treated with broad-spectrum antibiotics, which were prescribed by mouth or parenterally (depending on the severity and stage of the disease). At the stage of tick erythema tetracycline (0.5 g 4 times a day for 7-10 days) is preferable. Of the agents in tablet form, phenoxymethy penicillin (2,000,000 U/day), erythromycin (40 mg/kg weight/day) and levomycetin (2-1.5 g/day) are used. Duration of treatment is the same—7 to 10 days. In the case of serious neurological and articular complications, sodium salt of penicillin is used in a dosage of 20,000,000 U/day intravenously (4-6 infusions over a period of 10-14 days). Concurrently, other agents are also prescribed (glucocorticoids, anticholinesterase agents, vitamins, and others). Treatment of late manifestations of LB may present major difficulty and is not always successful.

Thus, LB, which is a little-known disease in the USSR, is characterized by a wide range of clinical manifestations, and it occurs over a considerable part of the country. Proper diagnosis at the early stage of LB permits prompt administration of appropriate treatment and prevents the chronic stage of the disease.

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#### Typhus Epidemic in Zakatalskiy Rayon Over

92WE01264 Baku BAKINSKIY RABOCHIY  
in Russian 18 Oct 91 p 4

[Article by E. Mikailzade: "Warning Signal: Epidemic is Over, But Danger Remains"]

[Text] All's well that ends well, goes the well-known saying. The typhus epidemic that broke out in July and August of this year in villages in the Danachinskaya Zone of Zakatalskiy Rayon where more than 10,000 people live fortunately ended without any human casualties. Almost all of the hospitalized patients and those suspected of having the disease, more than 200 people, returned to their families well. The local authorities, collectives of the health departments and central rayon hospital and the Azerbaijan health service of the Ministry of Public Health, took decisive and effective measures to produce positive results.

The source of the infection was acknowledged to be the plumbing. The point is that all three pipes that deliver potable water to the city, in spite of all the guidelines and standards, do not have purification equipment or sedimentation tanks, and the water is not regularly chlorinated due to stoppages in the supply of the components necessary for this. The city does not have a unified sewage system, and the carrying capacity of the available lines does not meet the actual need: there is not a single downpour, which is in no way a rarity for this area, that ends without a disaster. As a result, all of the contaminants spill into the Silbanchay River, which carries them farther, to the Karachay River, which has traditionally been the sole and main source of potable water for the local inhabitants. The river is also polluted by bathing, with laundry, and other structures of rural families that live near the river. It is true that there are also artesian wells in these areas. But they are all located rather far from the villages, and the public cannot always use them.

"Although the epidemic has been eliminated," says Shakhin Ibragimov, chief physician of the Zakatalskiy Rayon health department, the danger still remains for new outbreaks. The main reason for this is that many measures outlined by a competent commission have not

yet been implemented. For example, architectural plans have not yet been drawn up for the construction and repair of vitally important installations for this rayon, plumbing and a sewage system. The unearthing of 15 new artesian wells has been planned, but so far only three are ready. We need to hurry to prevent this disaster from happening again. Time does not wait.

#### Vladivostok Conditions Conducive to Infectious Disease

92WE0255E Moscow ROSSIYSKAYA GAZETA  
in Russian 7 Dec 91 p 4

[Article: "The Epidemic Is Nothing to Joke About"]

[Text] An epidemic of typhus and other infectious diseases threatens the city of 700,000. Vladivostok is choked with garbage, and the city's rat population is growing. Moreover there are practically no baths here, and rusty water runs from taps in apartments. The infection hospital, which is housed in former Czarist barracks built in 1880, does not even have a primitive isolation ward, not to mention modern AIDS treatment wards. The danger of infection by immunodeficiency virus, yellow fever and cholera will increase by several orders of magnitude when Vladivostok will open itself to foreign guests at the beginning of next year.

#### Typhus in Chelyabinsk

92WE0278A Moscow IZVESTIYA in Russian  
23 Jan 92 p 1

[Article by Georgiy Shcherbina: "Typhus Focus Arises in Chelyabinsk"]

[Text] The first victims were several workers of the Chelyabinsk Tractor Plant imeni V. I. Lenin Production Association. The epidemiological service established that they drank industrial water during their shift. This water comes to the shop from the Miass River, which is a perpetual recipient of untreated municipal and domestic wastes.

#### Possible Typhoid Fever Outbreak in Southern Ossetia

92WE0251B Moscow KOMSOMOLSKAYA PRAVDA  
in Russian 20 Mar 92 p 1

[Article by K. Blyaninov]

[Text] An epidemic of viral disease, possibly typhoid fever, broke out in Southern Ossetia's administrative center of Tskhivali.

**Increase in Syphilis Cases**

92WE0140A Moscow ROSSIYSKAYA GAZETA  
in Russian 27 Nov 91 p 4

[Article by O. Plakhotnikova: "Damned Disease. But Not Yet an Epidemic". First three paragraphs are ROSSIYSKAYA GAZETA introduction in boldface.]

[Text] "There are persistent rumors circulating that a syphilis epidemic has broken out in Russia. Is this true?" asks N. Anineyev, one of our readers from Tambov.

In reality, the syphilis morbidity rate in St. Petersburg increased by 56 percent in comparison with the first 9 months of last year. But that is not the highest: the Dagestan republic is leading in the solemn ranks. Moscow is in fourth place. Here the morbidity rate increased by 17 percent.

The pale spirochete that causes the disease ruined the statistics in 45 of 73 administrative territories in Russia (in comparison with last year's data. What is it? Is it the result of poor hygiene, poverty, or prostitution? Or is it the collapse of national public health? I asked these questions of Anatoliy Monisov, vice president of the RSFSR State Committee for Sanitation and Epidemiological Surveillance.

According to Anatoliy Monisov "there is no syphilis epidemic to discuss at present, although the situation has become exacerbated". The figures for the rise in morbidity by absolute numbers are much less threatening. In Moscow, for example, 900 new cases have been recorded. In Vologodskaya Oblast there were 72 cases, although for this same period last year only 12 new cases were recorded.

There are many reasons cited for the rise in syphilis morbidity. As Anatoliy Monisov reported, a purely biological matter was added to the unfavorable sociopolitical situation in the country. For these reasons there have been changes in the etiological agent of the disease, the spirochete. From time to time it becomes activated like before. Significant outbreaks of the disease were recorded in 1972 and 1978.

Then the morbidity rate subsided, and the next outbreak occurred in our time, when everything is already difficult even without it. You add here the loosening of morals with a shortage of condoms. Holes in sex education. Finally, the acceleration of processes of migration: large cities are being filled with newcomers who, according to venerologists, are far from the best with respect to syphilis. In general, the activation of the spirochete fell on fertile soil.

Liliya Tikhonova, a chief specialist in dermatovenerology for the Russian Ministry of Health, reported that more than 80 percent of the patients became infected following casual intimate contact with infected individuals. Moreover, most of them were intoxicated at the time. Incidentally, there are also simply abominable incidences: when a nursery school teacher was found to

have syphilis, her young charges also had to be sent for prophylactic treatment against the disease. Such cases are not isolated.

This is from the union Ministry of Health. According to Liliya Tikhonova, "In 1988, we were on the eve of a new outbreak in morbidity. The USSR Ministry of Health issued the order to reduce the number of occupational examinations for those people that had to regularly pass such an examination from four to one to two per year. And the more we looked, the more we found."

When it was understood in Russia that the time had come to open the clinics for anonymous screenings, the same union Ministry of Health began the attack with threatening circulars. It could not be. As a result, the Russian structures were able only to insist on getting their way. The clinics began to open, but the time had already passed.

Incidentally, the clinics for anonymous screenings, although they worsen the statistics (the "morbidity rate" rises), make it possible for honest citizens to be treated without the risk of ruining their reputation. But at the same time they are taking away the bread of the "shady" physicians who do not have the right to benefit in private practice from venereal diseases. Private physicians, in contrast to dermatovenerological or anonymous screening clinics, do not check the entire chain of the infection, as a result of which the hotbeds of the infection are not eliminated and remain a real threat to the public.

How can you remain healthy in such a situation? Forgive the triviality, but the most reliable method is to avoid casual relations. And those who nevertheless want to go ahead should use condoms. Men can stock up on the preparation "Tsidipol", which has appeared in pharmacies. This is personal protection which makes possible personal prophylaxis after dubious contacts. It was developed and is manufactured by the All-Russian Association for Preventing Sexually-Transmitted Diseases.

**VD Incidence in Kuban Up 50 Percent**

PM0204153992 Moscow KOMSOMOLSKAYA PRAVDA in Russian 31 Mar 92 p 1

[("News Agency and Our Correspondent" report from the "Facts Alone" column under the general heading: "People")]

[Text] There has been a 50-percent increase in the incidence of venereal disease in the Kuban in comparison with last year.

**Cholera Threat in Odessa**

92WE0255B D. Romanov: Moscow TRUD in Russian 19 Dec 91 p 2

[Article by correspondent D. Romanov: "Cholera Threat Still Around: Even at a Critical Time for the Population, Officials Prefer to Preserve Their Quiet Life"]

[Text] Wouldn't you know it: On that particular Monday, 19 August, when that indefatigable cello droned on endlessly on all Central Television stations, and the radio asked citizens not to be alarmed, a cholera epidemic began in the south of Odessa Oblast, in Kiliyskiy Rayon. Odessa's citizens joked gloomily: We were the first to offer a repulse to the coup's leaders—we met them with cholera.

In early September, when the situation in Kiliyskiy Rayon was still stressful and uncertain, I asked A. Korvetskiy, director of the Odessa Oblast Health Department, why the terrible disease made itself known once again in our neck of the woods.

"Specialists call this a natural focus," he replied. "Kiliyskiy Rayon is on the bank of the Danube, and a number of factors promoted the epidemic. Heavy rainfall in Germany and Austria washed fertilizers from the fields and farms, and caused a significant rise in the water level. Cases of cholera were also observed in Romania. The possibility that untreated liquid wastes entered the river is not excluded. The summer was hot, the cholera agent—*El Tor* vibrio—began reproducing actively, and it "swam" the Danube over to us. But this would not have been so terrible: The whole problem is that here in our area it found the most favorable conditions."

The little town of Vilkovo where the epidemic began has its own claim to fame. Hundreds—if not thousands—of articles, pamphlets and even songs have been written about it and its inhabitants, fishermen. "The Venice of the Ukraine" has become the city's second name.

It takes just a few days' stay in Vilkovo for the flower of the exotic to fall. Then you begin to understand that the city ekes out a pitiful existence, and that the life of its inhabitants is under a constant threat.

It is extremely rare to find a home, a dining hall, a school or a day care center equipped with running water and sewage disposal. They drink water straight out of channels called *yeriki*; this water is also used for all other needs. And the water in the formerly blue Danube is such that sometimes people are afraid to swim in it. Beside the city's canals, along the channels and *yeriki*, rodents that carry extremely dangerous diseases—tularemia, Q fever and others—make their home. Here is a line from an official reference: "Most therapeutic institutions in the cities of Kiliya and Vilkovo, built in 1940, are in a technical state of disrepair incompatible with operation." To put it simply, they are good for nothing.

Almost the same situation is also encountered in the rayon center of Kiliya, where the absence of Vilkovo's exotic environs is the only difference. Primitive sewer systems, and a pitiful pipeline that supplies four times less water than the population needs. And what sort of water is this? In order to be able to drink it without the fear of poisoning or falling ill, it must be treated with large doses of chlorine. If such water is used constantly or at least over a long period of time, deterioration of the

body is guaranteed. Given the neglect, and the almost Middle-Age "conveniences," only one thing can amaze us—that the present cholera outbreak is only the fourth since 1970. Yes, its causes may have been the most varied, but it was bound to happen, like night follows day.

"We were saved by the swiftness with which the danger was recognized and steps were taken," said A. Sidachenko, Odessa Oblast's chief public health physician. "After that, the older ones would not believe us: What sort of cholera is this, they said, if we're all still alive? They know how terrible this disease is. But we were able to pull many back from that other world—we acted in time. Physician V. Mokastyrska brilliantlly made an accurate diagnosis of two fishermen delivered to the hospital in Vilkovo, and he informed us immediately. The oblast health department and the Ukrainian Ministry of Health reacted without delay: All of the necessary medicines, solutions and equipment were delivered by air. Specialists came from Kiev, from other oblasts of the Ukraine and from Rostov. Cholera hospitals were deployed, vacationers were evacuated, and Vilkovo and Kiliya were closed down."

He speaks virtually as if he had just returned from a zone of combat operations. And that's precisely what it is—41 cholera patients, 114 infected individuals.

The misfortune could have been significantly greater. Not only Odessa Oblast but also neighboring Moldova and other regions of the Ukraine were threatened. All who fell ill were saved, and the epidemic was kept from crossing the rayon's borders, the danger of which was real.

"What we feared the most were new outbreaks," the chief public health physician continued. "Trouble could start anywhere: with the leaky water pipeline, the dairy with its prehistoric technology, with the overfilled city dumps. And on this background was the total inaction of many oblast services obligated to stabilize the situation in the rayon. But what could they possibly do?"

It was as if the municipal services and builders wanted to demonstrate that this terrible situation was totally out of their control. It was virtually a nightmare: no solar oil, no pipes, no excavators. No, no, no. R. Bodelan, the usually calm chairman of the oblast executive committee, was reduced to shouting. He demanded and pleaded, but it took days to patch the pipeline when time was being reckoned in the hours, and laughably simple problems could not be solved.

What resources and regulations would it take to raze the dilapidated toilet facilities in the city's marketplace? You can understand the anger of doctors who are so tired they can't stand up but still have to constantly beg for things from unperturbable officials. Unfortunately, if there was any good that the years of Soviet rule did for us, it was to nurture a population of executives that cholera will never scare.

It was a good thing that luck was on our side: In September the temperature of the water in the Danube dropped (El Tor vibrio reproduces only at a temperature above 16 degrees of heat), and the danger of a new outbreak decreased abruptly. We could breathe a sigh of relief. But that's today. What will things be like next year? The year after that?

"The prognosis is not reassuring," asserts A. Sidyachenko. "And it will continue to be that way until some guarantees are created. What kind? Normal water supply and sewage disposal, and decontamination of liquid wastes. By the way, when cholera broke out in 1977 in the same place, in Vilkovo, a wide-ranging plan was written: what needs to be built, who is responsible for what, and so on. But when the epidemic arose, everything fell apart. I'm afraid that things will be the same next time as well."

Yes, there are grounds for believing that this is what will happen. I was persuaded of this when I attended a meeting called by G. Sapenyuk, deputy chairman of the Odessa Oblast Executive Committee. Executives were gathered together from the largest trusts and planning institutes: Chernomorgidrostroy, Dunayvodstroy, Yuzhgidrospeletsstroy and other substantial, powerful organizations. One problem was discussed: progress in implementing the decision of the oblast executive committee "On Measures to Prevent an Unfavorable Epidemiological Situation in Kiliyskiy Rayon." That is, had construction of the water pipeline, the sewage system, a respectable hospital and other facilities, without which everything will unavoidably repeat itself, finally been started?

But there was something strange about that meeting. The underlying theme of the discussion was how to evade fulfillment of the plans. Every step, every possible concrete action was made dependent on a countless number of conditions and qualifications. And the results made themselves known quite quickly: No one accomplished anything.

It was later on, after listening to my tape of the meeting that I came to understand what was going on. I had attended such "discussions" before. In those days they shouted at the wrongdoers like guilty schoolchildren, pounding their fists on the table and threatening the worst: "We'll take away your party card!" But party cards are meaningless today. The executive committee can make all of the demands it wants, and deputies could grow hoarse in their search for consensus, but it won't do much good. Until we find new methods of administration in the altered conditions, and new stimuli and approaches, no changes will occur.

I could have concluded with this. But I would like to mention the following—just in passing, since it would require separate discussion. Large trusts and enterprises of oblast and republic scale are now being densely

overgrown with various cooperatives and small enterprises like suckers. Noncash transactions are transforming into cash transactions, and equipment, materials, capital and so on is being distributed. And when the Ukraine will finally adopt a law on privatization, it will be quite possible that there will be nothing to privatize. The same executives using the same work methods will find themselves at the helm of the "new" structures. And then they won't care at all about some pipeline for Vilkovo or a hospital for some little town. But this is only in passing.

As far as the "Venice of the Ukraine" and all of Kiliyskiy Rayon are concerned, in all probability they shouldn't count on changes in the foreseeable future, or anticipate a more-civilized life. All that is left is to hope that God will ward off misfortune. And that physicians will be able to react in time.

And it doesn't look as if we can count on anyone else.

#### Tbilisi Refutes Cholera Threat as Moscow 'Disinformation'

AU1903160092 Tbilisi Radio Tbilisi Network  
in Georgian 1400 GMT 19 Mar 92

[Text] Gossip concerning a cholera epidemic has been worrying Tbilisians for a week now.

Amiran Leshava, Georgian health officer, stated reassuringly: With full responsibility, I can state that there is no threat of any kind of epidemic. We have carried out tests that have confirmed that the gossip lacks all substance. It probably arose due to the fact that, in view of the gasoline shortage, there were no garbage collections in the city for several days and this is particularly dangerous at the start of spring. The situation is now somewhat stable although disinformation broadcast by Moscow's Vesti program has been frightening people. I can assure Tbilisians that if anything like this happens, the population will be immediately informed.

#### Flu Closes Moscow Schools

92WE0255A Moscow TRUD in Russian 11 Jan 92 p 1

[Article: "Winter Vacation Extended"]

[Text] Winter vacation was extended by 3 days, up to 15 January inclusively, for Moscow's schoolchildren. This decision was made by the city's Epidemiological Inspection Center in order to "weaken the position" of the influenza epidemic.

Nikolay Filatov, director of the Department for Organization of Epidemiological Surveillance Over Infectious Diseases, told a TASS correspondent that the flu peaked in the week of 23-30 December. It was precisely in these days that the number seeking medical care crossed the scientifically computed threshold of an epidemic—27,000 patients a day.

Medical personnel hope that the peak of the epidemic has already passed. Nonetheless it was decided to extend the vacation another 3 days in order to reduce the danger of infection of schoolchildren. Doctors advise children to spend more time outdoors, and to undergo preventive drying oil treatment prior to attending holiday festivities or going to theaters and museums.

#### Rumors of Serious Flu Threat Debunked by Professor

92WE0230C Moscow TRUD in Russian 14 Jan 92 p 4

[Article by I. Nevinnaya, "Spanish Virus Not Threatening Us". First paragraph is TRUD introduction in boldface.]

**[Text]** As usual, cases of upper respiratory diseases and influenza become more frequent in the winter. More than half of those admitted to the hospital in this country have been diagnosed with these diseases. The economic damage from influenza is estimated to be more than 3.5 billion rubles each year. As far as the influenza virus causing the disease this season is concerned, rumors are persistently circulating that it is as dangerous as the Spanish virus that took 20 million lives in 1918. Professor A. Slepushkin, director of the Influenza Etiology and Epidemiology Laboratory at the Virology Institute imeni D. Ivanovskiy, comments on the situation.

"In recent years influenza epidemics have been caused by two influenza A viruses and one influenza B virus. Last year there was an outbreak of influenza B with a little participation on the part of one of the types of influenza A. Consequently, this year the cases caused by a second type of virus A will become more frequent. It is related to the sadly well-known Spanish virus. But the public already has rather high immunity to this virus, since its epidemics occur every two years. So there is no need to fear a serious pandemic of the Spanish virus. It is a different matter that any influenza is unpleasant and is full of sequelae and complications for any patient."

"Are there any effective methods for protecting oneself from the flu, or is this impossible?"

"Unfortunately, too many people feel this disease is a natural disaster that cannot be avoided. Incidentally, our research shows that public vaccination, especially with live vaccines from the St. Petersburg Institute of Experimental Medicine, effectively decreases the morbidity level. There are few who know of the remarkable property of dibasol to enhance the body's immunity. Remantadine, arbidol [sic], oxolinic liniment, and leukocytic interferon are also effective. Almost all these drugs can

also be obtained from pharmacies rather freely. Finally, quite accessible methods of using gauze and avoiding contact with victims should not be disregarded."

#### Flu Epidemic Spreads to Perm

92WE0230B Moscow KOMSOMOLSKAYA PRAVDA  
in Russian 16 Jan 92 p 2

[["Did You Hear? Did You Read?"]]

[Text] Following after Kazan, Smolensk, and Stavropol, the flu epidemic has descended upon Perm. Each day approximately 4,000 people become ill here. Two fatalities due to the disease have been recorded. With the current deficit of medications, special recommendations for influenza prophylaxis to be published in all oblast newspapers are the only assistance from the health department supervisor.

#### Influenza in Kuzbass

92WE0230A Moscow ROSSIYSKAYA GAZETA  
in Russian 16 Jan 92 p 2

[Text] Almost 12,000 people in the past few days have entered medical establishments in the oblast center of Kuzbass. The influenza epidemic, which began in December of last year, has affected a large number of children; therefore, school vacations had to be extended by one week, until January 20. According to the estimations of specialists, the morbidity rate of Siberians is two times higher than in previous years. It is expected to last at least two more weeks.

#### Recombinant Vaccine Against Hepatitis B in Clinical Testing

92WE0324 Moscow MOSKOVSKIY KOMSOMOLETS  
in Russian 5 Mar 92 p 3

[Article by Yana Zhilayeva: "What Is a Bigger Threat to Us Than AIDS: A Domestic Vaccine Against Hepatitis B Has Been Created"]

[Text] The virus is an old one, well known and well tested. Every year, worldwide, hepatitis sends more than 2 million to the next life, and nearly 50 million individuals come down with it.

In the CIS, hundreds of thousands of people die every year from hepatitis. More than 15,000 people are virus carriers.

The hepatitis B virus, like AIDS, is transmitted via the "blood-to-blood" system. But it spreads faster and on a larger scale. In Central Asia, for example, virus carriers constitute almost one-fifth of the population, which places nations on the brink of extinction.

Hepatitis B attacks the liver, causing cancer and cirrhosis. Nowhere in the world has an effective treatment for hepatitis B been created.

In the opinion of some scientists, we will have an epidemic of hepatitis B in the summer-fall of this year. The sources will be contaminated water, lack of sanitary conditions everywhere, and the shortage of medicines.

The best barrier to the spread of the virus is inoculation. A vaccine against hepatitis B has been successful for almost five years now in the West, and it has enabled the medical profession to lower the percentage of infected individuals to 0.5% among the population as a whole. A vaccine against hepatitis B has been employed successfully by us, too—by the medical people of the notorious 4th administration.

The World Health Organization has developed a program to eliminate hepatitis B throughout the world by the year 2000.

Solving the problem of the spread of the virus in our country can be done in one of two ways: either by buying the vaccine in the West or by developing it ourselves. To battle the virus, we need 30 million doses annually for 10-15 years.

The Ministry of Health has not had the money to buy Western vaccine or to develop its own, it doesn't have it now, and it will not have it.

Two years ago, a group of scientists created the scientific production biotechnology center Bio-VTI, with the help of the Institute of Bioorganic Chemistry imeni M. M. Shemyakin, the Soviet-Austrian joint venture Vneshtreidinvest, the Institute of Immunology, and the Institute of Virology. Without any government financing, the firm of 30 people (including a driver and an office manager) dared to develop a domestic vaccine against hepatitis B. And they did it! The vaccine is undergoing clinical tests right now.

"In terms of efficacy," says Mikhail Valentinovich Budanov, head of the department for isolating and purifying antigens at Bio-VTI, "our vaccine is on a par with other such vaccines in the world, and it's cheaper. Our vaccine is absolutely safe. Unlike with plasma-based vaccine, the production of our recombinant vaccine does not use the blood of people who are ill, which precludes the possibility of viral infection during vaccination. Our vaccine is made on the basis of...baker's yeast. Whether it's more effective or less effective, it cannot be harmful to a human being."

To date, the development of the domestic vaccine has not cost the state a single copeck. Bio-VTI needs only 4 million rubles to completely finish its work and begin series production. At that point, the firm is ready to produce as many as 2 million doses of vaccine a year.

### Hepatitis Outbreak in Murmansk Caused by 'Polluted Water'

PM1703133992 Moscow ROSSIYSKAYA GAZETA  
in Russian 13 Mar 92 First Edition p 1

[Report from ROSSIYSKAYA GAZETA, ITAR-TASS roundup under the "News" rubric: "Hepatitis Outbreak in Murmansk"]

[Text] An outbreak of a hepatitis epidemic has been recorded in a suburban zone of Murmansk. Some 76 people are already ill, including 68 children. The city health and epidemic center has concluded that polluted water is the cause.

### Trichinosis Outbreak in Moscow Caused by Infected Pork

PM1903142592 Moscow KOMSOMOLSKAYA PRAVDA in Russian 19 Mar 92 p 1

[RIA report: "Outbreak of Trichinosis in Moscow"—passage between slantlines printed in boldface]

[Text] The capital's Sanitation and Epidemiology Inspectorate has announced that 27 people have gone down with trichinosis in Moscow, including one 12-year old boy. The source of infection was pork meat and lard purchased during the first few days of February at the main Cheremushkinskiy Market.

Trichinosis is a disease caused by tiny roundworms—trichinae. They can infect certain wild animals and domestic pigs. Upon infiltrating the human organism, the roundworms penetrate into the blood through the lymphatic system.

/The first sign of infection is high temperature, accompanied by facial edema, and muscle, joint, and stomach pains. Skin irritations and conjunctivitis are also possible./

According to Sanitation and Epidemiology Inspectorate staffer Irina Peskareva, patients were first admitted 6 March and their number is growing with each passing day. At the first signs of the disease it is recommended to go immediately to the local epidemiologist. The incubation period for trichinosis is between three and 40 days. Irina Peskareva announced that trichinae can survive in meat for around two months at a temperature of 12 degrees below zero, and for around one month at a temperature of 20 degrees below zero. They are not killed off through pickling or cooking. Often even thermal treatment fails to help. Anybody who acquired pork or lard at this market at the beginning of February is asked to telephone the following number: 287-30-51.

## IRELAND

### Influenza Epidemic Fills Cork Hospitals

92WE0316A Dublin IRISH INDEPENDENT  
in English 25 Jan 92 p 3

[Article by Dick Cross: "Flu Rush Hits Hospitals Hard"]

[Text] Hospitals in Cork city were yesterday at "breaking point" in dealing with complications to young and old arising from the 'flu epidemic sweeping the area.

The Regional Hospital had 50 more beds occupied than the same day last year and issued a public notice declaring only emergency admissions will be taken over the next two weeks.

Outpatient clinics will operate normally, but hospital manager Sean Hurley said overall resources are now under severe strain. There were 569 patients—well above their complement of recent months, he added.

Health board doctors say a "mixed bag of contagious viral illnesses and respiratory problems all over the place" in the area shows no sign of easing off.

GPs are said to be "worked off their feet" trying to cope with illnesses, while the number of bacterial meningitis cases has now risen to give in the city hospitals.

None of the patients had been in contact with one another beforehand.

### Meningitis Forces Cork School Closing

92WE0314A Dublin IRISH INDEPENDENT  
in English 30 Jan 92 p 3

[Article by Clodagh Sheehy: "Meningitis in School"]

[Text] An outbreak of meningitis has forced the closure of a national school in the Cork area.

Last night the Public Health Department of the Southern Health Board announced that Blarney Boys National School would close for the next 10 days "because of a concentration" of meningitis cases in one class in the school.

The Board said there had been nine suspected cases notified in the Cork area since the start of the year.

### Meningitis Appearance in Cork Sparks Fears

92WE0350A Dublin IRISH INDEPENDENT  
in English 25 Feb 92 p 4

[Article by Tony Connelly: "Silent Killer Meningitis Is Back"]

[Excerpts] "It was so unbelievably hard to accept," recalls Geraldine Anderson, "that an infectious disease

could come and, within a few hours, take the life of a normal, healthy baby. And it was a disease we knew absolutely nothing about."

That was three years ago in Carrigaline, Co. Cork, when Geraldine's six-week-old baby boy Frank was killed by meningitis. Three years later the silent killer has returned to the Cork area with a fatal vengeance, claiming the lives of an eight-year-old boy and a six-month-old baby girl. The infectious disease is particularly insidious in that those most at risk—the very young—are to an extent beyond the pale of modern medicine unless they are caught in time.

Since the second week in January its shadow has fallen on Cork, the swiftness with which it strikes and the relative obscurity surrounding the disease causing virtual hysteria, particularly among young families. An ad hoc hotline, set up by the Southern Health Board (SHB) was throbbing with 500 calls a day during the peak of the outbreak.

When the SHB placed a detailed advert in the local press warning parents about the signs and symptoms, two weeks after the first cases were reported, they had to borrow leaflets on meningitis from Geraldine Anderson in Carrigaline, who herself had had to seek information from the British Meningitis Trust in Stroud, Gloucestershire after her son died.

There was absolutely no information available in Ireland, she says.

The newspaper adverts came too late for Clifford Dorrington, an eight-year-old Mayfield boy attending St. Patrick's Boys National School in North Cork, who died in the Mercy Hospital the day the adverts appeared.

The outbreak started in Blarney in the second week in January, when four boys at Sacred Heart National School were hospitalised. Two other schools nearby were closed as the bug proliferated, and in all there were 18 suspected cases between the ages of six months and 16 years, 10 of which were confirmed. [Passage omitted]

There are two broad categories, viral and bacterial; viral is common and less serious and the majority of cases recover from it, although there is no antibiotic. The more deadly category is bacterial, and this is caused by the meningococcus organism, the one which killed Clifford Dorrington and six-month-old Christina Mary Woods. [passage omitted]

The schools which were closed already were seriously depleted in pupil numbers due to a flu-like virus which had struck the Blarney area. In effect, the schools were not being closed because of meningitis but because only one third of pupils were turning up. All the schools have now been reopened. [passage omitted]

Doctors are still at a loss as to why the number of meningitis cases in the country has increased so rapidly—it has doubled in the past two years to 154 last year, with 55 deaths in four years—and why it happens

in clusters. But there is a strong case for health authorities to use preventive measures because there is no single vaccine to tackle all strains of the bacterial category and not all the vaccines are effective. The C strain was accountable for nine of the hospital cases in Cork, while one person came down with the B strain. [passage omitted]

Despite the two deaths in Cork, Geraldine Anderson, who has since last year fought a campaign for more information on the disease, feels that the SHB did all it could to alert the public. She wrote to the then Health Minister Mary O'Rourke in December, enclosing leaflets and a video she had received from the British Meningitis Trust, and ironically received an acknowledgement just days before the first victims of the current outbreak died. The response by the local authorities and media this time has been impressive, she says. Three years ago the reaction was different. [passage omitted]

But meningitis is not a new disease. There were two deaths in Dublin in January, and there were previous fatal outbreaks in Wicklow and Galway. There were 49 cases in the Cork area last year between January and April, and Dr. Stynes is hopeful that this year the disease in Cork has already reached its peak. [passage omitted]

#### New Outbreak of Mad Cow Disease

92WE0313A Dublin IRISH INDEPENDENT  
in English 1 Feb 92 p 3

[Text] A large herd of dairy cows, worth £350,000, is to be slaughtered following the second outbreak of "mad cow disease," or BSE in the past month.

Although the Department of Agriculture would not say yesterday where or when the latest outbreak had occurred, farming sources suggested that it had broken out in mid-Cork within the past week.

The Department spokesman confirmed yesterday that there had been two outbreaks of BSE so far this year. He said last year there had been 16 cases and since 1989 a total of 46 outbreaks had resulted in 44 herds being slaughtered.

He added that the Department was satisfied that BSE was not contagious.

A spokesman for the Irish Farmers' Association said outbreaks of BSE resulted from infection caused by either imported feedstuffs or imported livestock.

To date, farmers have had to be compensated for the eradication of 44 herds worth a total of £4.6m.

BSE is usually found in dairy cattle rather than beef cattle, as the latter tend to have a life span of less than 2½ years.

#### Badgers Said To Spread Bovine Tuberculosis

92WE0382 Dublin IRISH INDEPENDENT in English  
4 Mar 92 p 4

[Text] A pilot study into the badger's role in the spread of bovine TB has found that the incidence of the disease in cattle was dramatically lower in an environment where the badger was strictly controlled, writes Willie Dillon, Agriculture Correspondent.

The three-year study was carried out between 1989 and 1991 by the ERAD/Teagasc tuberculosis investigation unit at University College Dublin. It will now form the basis for a nationwide study.

Ultimately, Irish researchers are hoping for a major vaccination programme of the badger population as a means of controlling TB, but they say developing an effective vaccine might be ten years away.

Details of the Co Offaly study were given yesterday in a bovine TB seminar at UCD by Dr Leonard Dolan of the ERAD/Teagasc unit. He said TB was endemic in the badger population and had been found in every county in Ireland during the 1980s.

#### NORWAY

#### Cerebrospinal Meningitis in Rogaland

92P20179A Oslo AFTENPOSTEN in Norwegian  
9 Mar 92 p 4

[Unattributed report: "Cerebrospinal Meningitis in Rogaland"]

[Text] A woman in her seventies was admitted to Rogaland Central Hospital with cerebrospinal meningitis. The woman got this form of meningitis after a child in the same family had the disease. The woman's condition is stable, and not life threatening. Lately, several patients have been admitted to the Rogaland Central Hospital with this disease.

#### PORUGAL

#### Brucellosis Cases Seen Increasing

92WE0290A Lisbon PUBLICO in Portuguese  
18 Feb 92 p 22

[Article by Imtiaz Juma: "'Rotten-Hay Disease' Gaining Ground in Portugal"]

[Excerpts] Brucellosis, a disease carried by livestock, is on the increase in Portugal. The official figures indicate that there are 1,100 new cases every year, but the reality is much more serious than that. According to the experts, more than 30,000 Portuguese citizens have swelled the ranks of those affected by the "rotten-hay disease" in the past five years.

Brucellosis, a disease that affects more than 1,500 Portuguese citizens every year, has been gradually gaining ground in recent years, although no reason for this phenomenon can be determined, according to a study carried out by experts at the First Medical Department of the Curry Cabral Hospital in Lisbon.

Rui Proenca, the head of the medical team that did this study, says, "Brucellosis still represents a public-health problem in our country, on the threshold of the 21st century, clearly reflecting the shortcomings in the health sector and the inefficiency of the medical-veterinary bodies responsible for the prevention and control of the disease."

"The gradual increase in its incidence in Portugal has no justification because the transmission cycle of the disease is clearly understood, as are the attitudes that must be adopted in order to prevent the disease in animals and its transmission to man," this specialist said in an interview granted to PUBLICO.

According to General Directorate of Primary Health Care (DGCSP) statistics, brucellosis has shown continuous growth in Portugal in recent years. It is estimated that, between 1986 and 1989, the number of cases increased by about 80 percent—from 874 to 1,574.

In 1990, more than 1,100 cases of Brucellosis were reported in continental Portugal alone, but, according to Maria de Fatima Pereira of the Communicable and Parasitic Diseases Department, this figure "does not include all of the persons infected, either because sub-clinical or atypical forms of the disease are common or because not all cases are being reported."

According to Rui Proenca, it is estimated that only one out of every five cases of brucellosis in Portugal is reported. This, in the final analysis, means that the real number of individuals infected by *Brucella melitensis* in the last five years (between 1986 and 1990) comes to more than 31,000 cases, instead of the slightly more than 6,000 cases officially reported.

The most recent DGCSP statistics indicate that the regions of the country in which the greatest growth is currently being seen are the districts of Guarda (102.7 new cases per 100,000 inhabitants), Braganca (68.9), and Beja (53.1).

The majority of the cases occur in the months of March and July (60 percent of all the cases in 1990), and the disease affects, above all, males (68 percent) in the group between ages 45 and 64. [passage omitted]

Most experts agree that the shortage of suitable means for use in combating brucellosis had allowed it to remain endemic in Portugal, where it still represents a frequent cause of febrile lumbar pain and sometimes febrile lumbosciatic pain. [passage omitted]

#### Dangerous Dairy Products

In the study carried out at the Curry Cabral Hospital, it was possible "to identify the continued indiscriminate consumption of unpasteurized milk, either directly or in by-products, especially what is known as fresh cheese." The problem of consumption of cheese in this category is also emphasized in the study carried out by Maria de Fatima Pereira, which indicated that about 30 percent of the cases of brucellosis in Portugal in 1990 were related to "the ingestion of dairy products, cheese in particular."

According to Canas da Silva, "Better coordination of the policies for combating the disease, particularly where the integration of the health services (both human and veterinary) is concerned, will be needed," if this problem is to be eliminated.

At the present time, according to the Communicable and Parasitic Diseases Department study, "the veterinary network has under way a program for combating brucellosis in livestock, with a view to its eradication."

The study carried out by Maria de Fatima Pereira adds that, "for bovine species, an annual increase can be seen in the number of animals checked, with a decrease in the percentage testing positive since 1981, while for bovine and caprine species, an increase in the number of animals checked is also seen, but the percentage of the herds testing positive increased between 1987 and 1989 and only began to decline in 1990."

Until such time as the effects of the veterinary control that has now been strengthened can be seen, the preventive campaigns among the rural populations in the interior of the country will have to be intensified, vigilance increased, and the compulsory nature of medical reporting respected. And, above all, the working conditions for the population groups at risk must be improved.

#### Swine Fever Affects Monchique Area

92WE0391A Lisbon DIARIO DE NOTICIAS  
in Portuguese 1 Apr 92 p 19

[Text] Two centers of African swine fever have been detected in two farm operations located in Alferce, Monchique. These cases may hold up the declaration already delivered to the Community certifying the region as a "free zone" in terms of this disease.

The individuals responsible for the outbreak of the disease in these two locations will be subject to criminal prosecution, DN [DIARIO DE NOTICIAS] has been told by the regional director of agriculture in the Algarve.

"In the past eight years, not one single case of African swine fever has been reported in the Algarve, thanks to the efforts of the government organizations and the swine breeders. It is hard to see this work challenged by less scrupulous individuals," Jaquelino Telo commented.

The regional director explained that it was concluded on the basis of investigation that "there can be no doubt the outbreak resulted from the illegal transportation of animals from zones such as Alentejo, where the disease is latent."

Swine fever in any zone that has not been declared free of the disease, according to Community norms, entails a prohibition on the export of pork and pork products. Therefore, according to the official in charge of the Algarve Regional Agriculture Office (DRAA), the transport of animals without a bill of lading and in violation of the norms governing the Community program being implemented to eliminate the disease is "a crime against the state, against the economy, and against the swine breeders themselves."

"If no new case develops, the EC will allow the restriction to be lifted in three months' time, and the zone can be declared free of the disease a year later," this official explained.

The outbreak of the disease was detected at the end of February, first in a small pigsty and, a few days later, in an industrial swine-breeding establishment in Alferce, which, curiously enough, is owned by the president of the Association of Swine Breeders.

As soon as the disease was reported, the DRAA ordered the isolation of a zone covering the municipality of Monchique and the adjacent areas, in order to prevent its possible spread.

Although the outbreak seems to have been dealt with, this situation has caused a delay in the declaration of the Algarve as the first Portuguese zone "free" of the disease, which would lead to expanded market prospects.

## UNITED KINGDOM

### Fall in Salmonella Attributed to Gulf War

92WE0312A London THE DAILY TELEGRAPH  
in English 29 Jan 92 p 4

[Article by David Fletcher: "Fewer Cases of Salmonella Poisoning"]

[Text] The number of people suffering from salmonella food poisoning fell last year for the first time in five years, the Public Health Laboratory Service said yesterday.

It said the number of cases dropped by eight percent from 30,112 in 1990 to 27,693 last year.

The fall in *Salmonella enteritidis* phage type four—the strain associated with eggs and poultry—fell slightly more, by nine percent from 16,151 to 14,693.

The decreases follow dramatic year-by-year rises since 1986 when the number of phage type four cases was fewer than 3,000.

According to the report eggs were blamed in 44 percent of cases when a suspect food was linked to a salmonella outbreak. Poultry was responsible in 25 percent of cases, other meat in about 11 percent of cases and other foods in 20 percent of cases.

Mr. Richard North, former environmental health officer and now an advisor to the UK Egg Producers' Association, said the main reason for the decline was the "massive recession" in the catering and travel industries which followed the Gulf war.

He said the underlying trend for salmonella food poisoning had been increasing since the end of the war.

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